Public Opinions, Attitudes and Awareness Regarding Water in Colorado

Colorado Water Conservation Board
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Public Opinions, Attitudes and Awareness Regarding Water in Colorado

Prepared for
Colorado Water Conservation Board

Prepared by
BBC Research & Consulting
1999 Broadway, Suite 2200
Denver, Colorado 80202-9750
303.321.2547 fax 303.399.0448
www.bbcresearch.com
bbc@bbcresearch.com
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Attachment A – Telephone Survey Instrument
SECTION I.
Introduction and Methodology

The Colorado Water Conservation Board (CWCB) contracted with BBC Research & Consulting (BBC) in 2012-2013 to conduct and analyze a statewide survey of public opinions, attitudes and awareness regarding water in Colorado. This report documents the survey and its results. This section provides background regarding the study and discusses the development of the survey instrument and the process of conducting the survey. Section II describes the overall results of the survey from a statewide perspective, and provides insight into how opinions and attitudes concerning water vary among different demographic segments of the state’s population. The following sections (sections III through VIII) describe the results of the survey for each of the six sub-state regions defined for this project.

The impetus to conduct a survey of Coloradan’s opinions and attitudes concerning water and water-related issues began with a previous CWCB project completed in 2011 by the communications consulting firm of GBSM. After reviewing available survey information from prior work in Colorado and elsewhere, the final report for that study, *Colorado’s Water Future: A Communications Roadmap for Enhancing the Value of Water*, included the following recommendation:

*In order to accurately determine Coloradans’ baseline knowledge levels and attitudes about water, it is highly recommended that a comprehensive survey of a large sample of Coloradans, coupled with focus groups, be conducted.*

The survey described in this report directly responds to that recommendation. During the course of this study, CWCB decided that instead of focus groups, it would be more useful to redirect study resources to enhance the context and understanding of the survey results through additional research and comparison with other surveys that have asked related questions (both in Colorado and elsewhere) and to conduct a limited number of follow-up telephone interviews with selected survey respondents.

This study, together with the survey database, provides important and unbiased information on the current perspectives of Colorado’s residents regarding water and water-related issues. We are confident that individuals and organizations throughout Colorado that are interested in the state’s water issues, regardless of their perspectives, will find this information useful for a wide variety of purposes.

**Methodology**

Fundamental aspects of the methodology for this study included definition of sub-state regions for the survey, development of the survey instrument, implementation of the telephone survey and post survey analysis. Each of these topics is discussed below.
Study regions. In view of Colorado's geographic diversity and the varied uses of water throughout the state, one key objective for this study was to not only develop information on how Coloradans as a whole perceive water and water-related issues, but also how those perceptions may differ across the state. To meet that objective, six regions were developed for this study. The map on the following page depicts the study regions.
Figure 2. Map of study regions
Each of the study regions is comprised of one or more of the river basins that have been developed for water planning purposes through the Colorado Basin Roundtable process. More specifically, the following figure illustrates the relationship between the regions used in this study and the basins defined for the Basin Roundtable process.

Figure 1. Relationship between study regions and Colorado Basin Roundtables

<table>
<thead>
<tr>
<th>Study Region</th>
<th>Basin Roundtable(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Southeast</td>
<td>Arkansas Basin</td>
</tr>
<tr>
<td>Denver Metro</td>
<td>Metro Roundtable</td>
</tr>
<tr>
<td>Northeast</td>
<td>South Platte Basin</td>
</tr>
<tr>
<td></td>
<td>North Platte Basin</td>
</tr>
<tr>
<td>San Luis Valley</td>
<td>Rio Grande Basin</td>
</tr>
<tr>
<td>Southwest</td>
<td>Gunnison Basin</td>
</tr>
<tr>
<td></td>
<td>Southwest Basin</td>
</tr>
<tr>
<td>West Northwest</td>
<td>Colorado Basin</td>
</tr>
<tr>
<td></td>
<td>Yampa/White Basin</td>
</tr>
</tbody>
</table>

Development of the survey instrument. One of the most important aspects of any survey-based study is the development of the survey instrument. For this project, the instrument needed to gather information on several different aspects of public awareness and opinion regarding water and water issues within a typical timeframe of about 12 minutes.

The process of developing the survey instrument included the following steps:

- Consultation with CWCB and the Value of Water Committee established during CWCB's previous study regarding the general topics to be covered in the survey,
- Research into the approaches and wording used in related surveys previously conducted by BBC, conducted by others in Colorado and conducted in other states,
- Several iterations of draft survey instruments and review meetings with CWCB,
- E-mail review of the draft instrument by a diverse array of approximately 200 water stakeholders identified by CWCB across Colorado, and
- Final revisions in response to stakeholder input.

The final survey instrument is provided in Attachment A to this report.

Telephone survey process. The telephone survey was pre-tested in mid-November 2012. During late November and early December 2012, BBC's subcontractor Davis Research (Davis) completed 325 telephone surveys with the residents of each of the six study regions, for a total of 1,950 survey responses across the state of Colorado. In order to reach a representative sample of each region's population, Davis used a listed sample (rather than random digit dialing). The
telephone survey was administered in either English or Spanish, as necessary. Because cell phone only households are increasingly common, and typically have different demographic characteristics from households with land lines, 38 percent of the surveys were conducted with respondents via their cell phones and 62 percent were conducted via land lines. Further information regarding respondent demographics is provided in Section II.

**Survey analysis, additional research and report development.** Results from the survey were analyzed for the state as a whole, for different demographic groups within the state (e.g., by age, race/ethnicity, income level, length of residence in Colorado), and by region. As further discussed in Section II, statewide results were developed by weighting the responses from the individual regions according to each region’s relative share of the state’s overall population.

To place the results in further context, BBC obtained and reviewed a number of other surveys in Colorado and elsewhere that had asked questions similar to some of those included in this survey. Where relevant, these comparative results are discussed in Section II of this report. BBC also conducted follow-up telephone interviews with 20 survey respondents to gather more qualitative insights into the reasons why respondents identified the quality of water they receive at their home or the amount of water available for Colorado’s farms and ranches as the most important water-related issue in Colorado. These were the two most frequently identified “most important” issues, as discussed further in Section II.

Throughout the description of the statewide survey findings in Section II, and the descriptions of the regional survey results in Section III through Section VII, comparisons are made between the survey responses of different demographic and geographic groups of respondents. These comparisons focus primarily on results that are “significantly” different from one another. When the terms “significantly different” or “statistically significant difference” are used in these sections, it means there is a 95 percent statistical probability that the results for the groups being compared would not be the same even if we had been able to survey every member of the relevant demographic groups, or every resident of the state or region.

BBC received extensive support and assistance from CWCB’s project team (including CWCB staff and GBSM staff) throughout this project. We had numerous face-to-face meetings, and other discussions via phone and e-mail, to review preliminary survey results, focus our efforts, and improve the report. Their talent and dedication was critical to the success of this effort.
SECTION II.
Statewide Survey Results

This section provides detailed information about statewide survey responses. Survey quotas were based on obtaining a sample of 325 responses from each of six regions in Colorado, which differ in their total populations. The study team combined responses from each of the six regions to create the statewide sample analyzed in this report. Because 325 responses were obtained from each region, regional samples did not reflect the true population shares for each region. For example, one-sixth of statewide survey respondents were obtained from the Metro Denver region, but about one half of all Colorado residents reside in that region.

To adjust for true population shares, the study team assigned each of the six regions a survey weight based on the regions’ shares of Colorado’s total population. Weights were assigned to each survey respondent depending on their region. The analysis presented in this section reflects statewide estimates based on the population weighted compilations of the regional results.

The remainder of this section presents information collected from statewide survey responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team examined responses based on key demographic information, as appropriate, for each survey question.

Knowledge of Colorado Water Use and Issues

The survey asked a series of question to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

1 Detailed survey results for each of the six regions in Colorado are presented in separate sections of this report.
**Sector that uses the most water.** When asked which sector uses the most water in Colorado, respondents most frequently identified farms and ranches (35%), as shown in Figure II-1. While that answer is correct, the majority of Coloradans did not correctly identify agriculture as the largest water user:

- 32 percent of survey respondents said households used the most water; and
- 30 percent said industrial and commercial industries used the most water.

It is worth noting, however, that later in the survey respondents identified the amount of water available for farms and ranches as one of the greatest concerns among nine potential water-related issues. Pages 13 through 18 provide more detail on this aspect of the survey.

![Figure II-1. Which sector uses the most water in Colorado?](image)

**Attention to water issues and water use.** As shown in Figure II-2, most survey respondents (72%) indicated that they pay more attention to water issues today than in the past. About 5 percent said they paid less attention water issues today. A similar majority of respondents (73%) indicated they pay more attention to their own water use than they have in the past.

**Demographic distinctions.** The study team examined whether attention to water issues varied with the length of residency in Colorado. The bottom graph of Figure II-2 shows that respondents who indicated they have lived in Colorado for 10 or more years were more likely to be paying increased attention to water issues than those who have lived in Colorado for less than 10 years (76 percent compared to 67 percent), and that difference was statistically significant.
Figure II-2.
Do you pay more or less attention to water issues today?

Note:
Asterisks (*) denote statistically significant difference between respondents who reported living in Colorado for less than 10 years and respondents who reported living in Colorado for 10 or more years at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:

Reasons for paying more attention to water issues. Of those respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure II-3 shows the reasons why people are paying more attention to water issues. The most common reasons are:

- Recent drought or dry year (26%);
- Personal demographic reasons (e.g., older/more aware, have children, moved here from another state) (24%); and
- Water quality issues (e.g., perceived lower quality of water, increase in water pollution/contamination, safety/health concerns) (13%).
Figure II-3.
Reasons why Coloradans pay more attention to water issues than in the past

[Bar chart showing reasons for paying attention to water issues, with percentages for each reason.]

Note: n=1,460. Totals do not equal 100%, because respondents could choose more than one option.

Perceptions of Household Water Service

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each services is: inexpensive, priced about right, or too expensive. Overall, respondents consider household water service to be a relatively good value.

Figure II-4 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV and telephone/cell phone services.

- 72 percent of respondents indicated that water was “inexpensive” or “priced about right,” compared to 28 percent who indicated that water was “too expensive”;
- 52 percent of respondents indicated that energy was “inexpensive” or “priced about right,” compared to 48 percent who indicated that energy was “too expensive”;
- 40 percent of respondents indicated that telephone/cell phone was “inexpensive” or “priced about right,” compared to 60 percent who indicated that telephone/cell phone was “too expensive”; and
- 20 percent of respondents indicated that cable or satellite TV was “inexpensive” or “priced about right,” compared to 80 percent who indicated that cable or satellite TV was “too expensive.”

A national Value of Water Survey by ITT in 2010 found that voters value water more than any other service. Electricity and heat were second and third, ahead of internet, cell phone and cable television.
**Figure II-4.**
Relative perceptions of home water service

Note:
Asterisks (*) denote statistically significant difference from water at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:

**Demographic distinctions.** The study team examined whether the perceptions regarding home water service differed among demographic groups defined by household income and race/ethnicity. Figure II-5 reports those findings.

Figure II-5 also shows that the share of respondents who indicated that water was “too expensive” decreased as household income increased.

- 32 percent of survey households that earn less than $50,000 indicated that water was “too expensive;”
- 24 percent of survey households that earn between $50,000 and $75,000 a year indicated that water was “too expensive;” and
- 19 percent of survey households with that earn over $75,000 indicated that water was “too expensive.”

Figure II-5 also shows that compared to white\(^2\) survey respondents, a larger share of Hispanics indicated that water was “too expensive” (34% compared to 23%), and that difference was statistically significant.

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\(^{2}\)Throughout this report “white” refers to non-Hispanic residents of Caucasian descent.
**Figure II-5.**
Perceptions of home water service, by demographic.

![Graph showing perceptions of home water service by demographic.](image)

**Note:** Double daggers (‡) denote statistically significant difference from $50,000–$74,999 at the 95% confidence level; asterisks (*) denote statistically significant difference from white at the 95% confidence level. Totals may not equal 100% due to rounding.

**Source:** BBC Research & Consulting from Colorado Water Conservation Board household telephone survey conducted November, 2012.

**Performance of Government Agencies**

Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means "completely disagree" and 10 means "completely agree," respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figure II-6 presents those results.

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According to the 2008 *Public Perceptions, Preferences and Values for Water in the West* survey by CSU researchers, 80 percent of Coloradans felt that the quality of surface waters where they live were fair, good or excellent. However, 25 percent of respondents indicated that these waters were “good, but deteriorating.” 51 percent of respondents in that survey thought the state government was most responsible for protecting water quality in their community, followed by local city/county governments (23%) and the federal government (12%).
Overall, 48 percent of respondents agreed or strongly agreed with the statement that “government agencies are doing enough to protect the quality of your drinking water,” though there was not strong support for the statement. The average level of agreement was 6.1 (out of 10), and 22 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty percent of respondents provided an essentially neutral response (rating their level of agreement as 5 or 6 out of 10).

Response to the statement “government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes” was similar with a statewide level of agreement of 6.0 out of 10. Forty-five percent of respondents agreed or strongly agreed with that statement, and 24 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty-two percent of respondents provided a neutral response.

Figure II-6.
Performance of government agencies

Note: Totals may not equal 100% due to rounding.
Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:

- Colorado has enough water available to meet our current needs; and
- Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

Current water needs. Figure II-7 shows that, overall, statewide respondents indicated mild disagreement that Colorado has enough water to meet its current needs. On average, agreement was 4.9 out of 10, and 46 percent of respondents either disagreed or strongly disagreed with that statement. Twenty-nine percent of respondents agreed or strongly agreed with the statement, while 25 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

Demographic distinctions. The study team examined whether perceptions about current water scarcity differ by demographic groups defined by age and length of residency in Colorado. Figure II-7 indicates that, compared to older respondents, Coloradans between the ages of 18 and 34 were more likely to agree that Colorado has enough water to meet our current needs. On average, respondents between 18 and 34 rated their level of agreement with that statement 5.1 out of 10, compared to 4.6 out of 10 for respondents between 35 and 54 and 4.5 out of 10 for respondents 55 or older. Those differences were statistically significant.

Respondents who have lived in Colorado for less than 10 years were more likely to agree that Colorado has enough water to meet our current needs than those who have lived in the state for 10 or more years (4.9 compared to 4.6 out of 10), but that difference was not statistically significant.
Figure II-7. Colorado has enough water to meet our current needs.

Water needs for the next 40 years. Figure II-8 shows that, on average, Coloradans disagreed that “Colorado has enough water available to meet our needs for the next 40 years.” The average response to this statement was 3.5 out of 10, and 68 percent of respondents disagreed or strongly disagreed. Only 13 percent agreed or strongly agreed with the statement.

Demographic distinctions. Perceptions about water scarcity for the next 40 years varied with age. Figure II-8 shows that compared to older respondents, Coloradans between the ages of 18 and 34 were more likely to agree that Colorado has enough water available for the next 40 years. On
average, respondents between 18 and 34 rated their level of agreement 3.9 out of 10, compared to 3.4 out of 10 for respondents between 35 and 54 and 3.0 out of 10 for respondents 55 or older. Those differences were statistically significant.

Respondents who have lived in Colorado for less than 10 years were more likely to agree that Colorado has enough water to meet our needs over the next 40 years than those who have lived in the state for 10 or more years (3.6 compared to 3.3 out of 10), but that difference was not statistically significant.

Figure II-8.
Colorado has enough water for the next 40 years.
**Looking forward.** Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that “Colorado will have enough water available to meet all of its needs in the future.”

Figure II-9 presents those results. On average, respondents rated their confidence that Colorado will have enough water to meet all of its future needs as 4.0 out of 10. Fifty-nine percent of respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs. Seventeen percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs, while 24 percent provided a neutral response (rating their confidence as 5 or 6 out of 10).

**Demographic distinctions.** As shown in Figure II-9, confidence that Colorado will have enough water to meet its needs varied by respondent age and length of residence. Compared to older respondents, Coloradans between the ages of 18 and 34 were more confident that Colorado will be able to meet its future water needs. On average, respondents between 18 and 34 rated their confidence 4.3 out of 10, compared to 3.9 out of 10 for respondents between 35 and 54 and 3.4 out of 10 for respondents 55 or older. Those differences were statistically significant.

Respondents who have lived in Colorado for less than 10 years indicated more confidence that Colorado will be able to meet its future water needs than those who have lived in the state for 10 or more years (4.4 compared to 3.7 out of 10), and that difference was statistically significant.

The mixed responses concerning the adequacy of Colorado’s water supplies to meet our current needs are similar to results from other recent surveys, though perhaps slightly more pessimistic because this survey was conducted during drought conditions. In the 2008 *Public Perceptions, Preferences and Values for Water in the West* survey, 48 percent of Colorado respondents believed we did not have enough water to meet current needs, compared to about 44 percent who believed we did have enough water. In contrast, 64 percent of River District residents indicated they somewhat or strongly agreed that Colorado has adequate supply of water to meet our current needs in the River District’s 2009 survey. However, approximately 70 percent of respondents in both of these surveys indicated they believe Colorado does not currently have adequate water supplies to meet our future needs.
Figure II-9.
Colorado will have enough water to meet our future needs.

Although Coloradan’s confidence that we will have enough water to meet our future needs is not high, comparison of the results shown in Figure II-9 with those in Figure II-8 indicates respondents have some hope that we will find solutions to meet our increasing water needs. Forty-two percent of respondents gave a higher rating to the question of whether we will have enough water to meet our future needs than to the question of whether we currently have enough water for the future. Thirty percent gave the same rating to both questions and 27 percent indicated less confidence that we will have enough water in the future.

Note: Daggers (†) denote statistically significant difference from 18 to 34 years at the 95% confidence level; lozenges (◊) denote statistically significant difference between respondents who reported living in Colorado for under 10 years and respondents who reported living in Colorado for 10 or more years at the 95% confidence level. Totals may not equal 100% due to rounding.

Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado’s cities and towns;
- Amount of water available for Colorado’s farms and ranches;
- Amount of water for recreational use such as boating, rafting and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure II-10 presents the reported level of concern for each issue. On average, the amount of water available for Colorado’s farms and ranches received the highest rating of concern (7.0 out of 10).
Figure II-10.
Water-related issues.

Demographic distinctions. The study team examined whether the relative concerns for water-related issues varied across demographic groups defined by race/ethnicity, age and length of residency in Colorado. Figure II-11 presents those results, showing a number of key findings.

- With the exception of the amount of water available for Colorado’s farms and ranches, Hispanics were more concerned, on average, than white respondents concerning all potential water-related issues, and most of those differences were statistically significant.
- Overall, respondents who reported being another minority were more concerned, on average, than white respondents with potential water-related issues.
- Compared to younger respondents (between 18 and 34), respondents between 35 and 54 were more concerned, on average, with the amount of water available for farms and ranches.
- Compared to older respondents (55 or older), respondents between 18 and 34 were more concerned, on average, with the quality of water you receive at your home.
- Compared to younger respondents (between 18 and 34), respondents 55 or older were more concerned, on average, with the amount of water used for energy development.
There was little variation in perceptions of water-related concerns between respondents who have lived in Colorado less than 10 years versus long-time residents.

**Figure II-11.**
Water-related issues, by demographic.

Note: Asterisks (*) denote statistically significant difference from white at the 95% confidence level; daggers (†) denote statistically significant difference from 18 to 34 years at the 95% confidence level.

Willingness to pay. The survey asked participants whether they would be willing to pay an additional $1, $5, $10 or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure II-12 presents those results for all survey respondents and for respondents across varying levels of annual household incomes: less than $50,000, $50,000 to $75,000 and more than $75,000. Survey results indicate that most Coloradans would be willing to pay an additional charge to address water-related concerns.

- 66 percent of respondents indicated that they would be willing to pay an additional $1 per month;
- 54 percent of respondents indicated that they would be willing to pay an additional $5 per month;
- 48 percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- 34 percent indicated that they would be willing to pay an additional $25 per month.

On average, survey households would be willing to pay between $5 and $10 per month to address a variety of potential concerns identified in the survey.

Demographic distinctions. Willingness to pay to address water-related issues varies by household income level. More than half of households with at least $50,000 in annual income would pay at least $10 per month to address water related concerns.

Figure II-12.
Willingness to pay to address water-related issues

The finding that most Coloradan’s are willing to pay to address Colorado’s water-related issues is consistent with other recent survey research. The 2008 survey by researchers at CSU discussed previously found that 67 percent of respondents were willing to pay $5 per month and 59 percent were willing to pay $10 per month to address water issues. A 2009 survey for the Colorado River Water Conservation District (“River District” or “District”) found that 56 percent of District residents were willing to support a small increase in property taxes to help the District “protect and safeguard Western water.” The national survey by ITT found that 63 percent of voters would be willing to pay a little more in their water bills to “upgrade our water system to ensure long-term access to clean water.” The average amount voters were willing to pay was $6.20 per month.

**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure II-13, respondents most frequently indicated that the quality of water you receive in your home was the most important potential water-related issue that needs to be addressed (24%). The second and third most frequently identified most important issues were:

- Amount of water available for Colorado’s farms and ranches (21%); and
- Amount of water for Colorado’s cities and towns (18%).
The study team conducted 20 brief, follow-up telephone interviews with respondents who had indicated the quality of water they receive in their home or the amount of water available for Colorado’s farms and ranches were their most important concern. The interviews with respondents who had identified the quality of water they receive in their home was their most important issue generally indicated that:

- Most of these respondents selected quality of water at home because of water’s critical contribution to their family's health, and
- Most were satisfied with their current home water quality, but were concerned about potential contamination in the future, and
- Some respondents cited stories in the media regarding water contamination as a reason for their concerns.
The follow-up interviews with respondents who had identified the amount of water available for Colorado’s farms and ranches were their most important concern indicated:

- These respondents are concerned about maintaining the ability of Colorado's farms and ranches to produce our food locally and about maintaining the vitality of Colorado’s rural communities, and
- They are concerned about growth in Colorado’s larger cities and pressure to move water from agricultural to urban uses, and
- Although some respondents indicated concerns about these situations at present, most are more concerned about the future.

**Most important water-related issue, by race/ethnicity.** Figure II-14 shows that the most important potential water-related issues varied by race/ethnicity and by age. Respondents of all races and ethnicities most frequently identified the amount of water available for Colorado's farms and ranches and the quality of water you receive in your home as the two most important water-related issues. However, white respondents were much more likely to identify the amount of water available for Colorado's farms and ranches as the most important issue, while Hispanics (24%) and other minorities (31%) were much more likely to identify the quality of water you receive in your home as the most important water-related issue, and those differences were statistically significant.

**Most important water-related issue, by age.** Respondents’ choices of the most important water-related issue also varied with age. Figure II-14 shows that respondents between 18 and 34 were more likely to identify water quality in our rivers, lakes and streams as the most important potential issue than respondents 55 or older (10% compared to 6%), and that difference was statistically significant. The share of respondents who identified the amount of water available for Colorado's farms and ranches as the most important issue increased with age, with younger respondents between 18 and 34 being the least likely to identify that issue as the most important water-related concern.

Compared to older respondents — between 35 and 54 (20 percent) and those 55 or older (18 percent) — younger respondents between 18 and 34 (27 percent) were more likely to identify the quality of water you receive in your home as the most important water-related issue, and those differences were statistically significant.
These findings regarding Coloradan’s priorities in terms of water-related issues are generally consistent with other survey research. In the undated Survey of Public Attitudes About Water Issues in Colorado conducted by CSU researchers, clean drinking water rated the highest in terms of “very/extremely important issues.” A 2008 statewide survey of Texas residents also found that “clean drinking water” was the most frequently cited “very important issue” among 15 potential water quality and quantity related concerns. Water for agriculture rated highest among quantity related concerns and 7th overall. Respondents to a broader survey sponsored by Colorado College in 2011 ranked “loss of family farms and ranches” as the most serious environmental problem across western region, ahead of “pollution of rivers, lakes and streams” (#3) and “inadequate water supplies” (#5). “Impact of oil and gas on land, air, and water” was ranked #10 of 15. However, BBC’s 2009 survey of Denver Water customers found that those customers ranked “having enough water” as the most important issue. Water quality/good tasting water ranked third. In the River District’s 2009 survey, “Drying up of Farm and Ranch Lands” was the most frequently ranked as extremely or very concerning among various issues, along with demands from out of state water interests.

Figure II-14.
Most important water-related issue, by demographic.

Note: Asterisks (*) denote statistically significant difference from white at the 95% confidence level; daggers (†) denote statistically significant difference from 18 to 34 years at the 95% confidence level. Totals may not equal 100% due to rounding.

Addressing the most important water-related issues. Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure II-15 presents those results.

Overall, respondents most frequently indicated that their most important potential water-related issue should be addressed through conservation (19%), though the response to this question differed depending on which water-related issue respondents felt was most important (as discussed on the following page). Respondents also frequently indicated that their most important concerns should be addressed by:

- Prioritizing environmental needs (14%); or
- Developing new projects/building more dams or reservoirs (14%).

Figure II-15.
What should be done to address the most important water concerns?

Note: Totals do not equal 100% because respondents could choose more than one option.
How participants thought about addressing water-related issues varied depending on what they had identified as their most important water-related concerns. Figure II-16 presents responses for addressing the top three most important potential water related concerns:

- Quality of water you receive in your home;
- Amount of water available for Colorado’s farms and ranches; and
- Amount of water for Colorado’s cities and towns.

**Quality of water you receive in your home.** To address the concern of quality of household water, respondents most frequently indicated that water pipelines or infrastructure should be fixed or rebuilt (19%). A number of respondents also indicated that the quality of household water should be addressed by:

- Keeping water clean/sanitary (16%); and
- Increasing government regulation of water usage (16%).

**Amount of water available for Colorado’s farms and ranches.** Respondents most frequently indicated that concerns about water for farms and ranches should be addressed through conservation (25%).

**Amount of water for Colorado’s cities and towns.** Respondents most frequently indicated that concerns about water for cities and towns should be addressed through conservation (29%).

Several other recent surveys have gathered public input on their preferences concerning water strategies. The undated *Public Perceptions, Preferences and Values for Water in the West* survey by CSU researchers found that building reservoir storage was ranked first among strategies. Various conservation and reuse options, however, were ranked second, third and fifth among the eight options provided. Taken together, conservation and reuse as a package would have ranked first. Respondents in that survey also indicated mild agreement with the proposition that “Reallocating water for the natural environment and for human use should have the same priority” (average score about 3.5, where 3.0 is neutral and 5.0 is strong agreement). A 2013 survey of 710 Colorado voters by Public Opinion Strategies found that 80 percent of Colorado voters favored emphasizing conservation over building new projects in order to meet Colorado’s water needs.
Figure II-16.
What should be done to address the most important water concerns? Breakdown by top three concerns.

<table>
<thead>
<tr>
<th>Concern</th>
<th>The quality of water you receive in your home (n=275)</th>
<th>Amount of water available for Colorado’s farms and ranches (n=439)</th>
<th>Amount of water available for Colorado’s cities and towns (n=302)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation</td>
<td>9.5%</td>
<td>28.5%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Prioritize environmental needs</td>
<td>1.4%</td>
<td>7.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Develop new projects/Build more dams/reservoirs</td>
<td>11.2%</td>
<td>6.8%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Education</td>
<td>0.4%</td>
<td>0.7%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Monitor/test water for quality/safety</td>
<td>10.3%</td>
<td>16.7%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Limit Growth</td>
<td>1.4%</td>
<td>4.5%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Keep water clean/sanitary</td>
<td>16.0%</td>
<td>10.6%</td>
<td>5.3%</td>
</tr>
<tr>
<td>More government regulation of water usage</td>
<td>15.7%</td>
<td>0.0%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Fix/rebuild pipelines/infrastructure</td>
<td>19.4%</td>
<td>6.8%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Limit water leaving the state/keep water in CO</td>
<td>2.7%</td>
<td>0.0%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Limit/regulate fracking/energy development</td>
<td>0.9%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Reuse</td>
<td>0.0%</td>
<td>9.8%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Raise the price of water</td>
<td>6.7%</td>
<td>3.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Increase water availability for farms and ranches</td>
<td>0.1%</td>
<td>4.1%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Less government regulation</td>
<td>0.4%</td>
<td>0.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Conduct research/studies</td>
<td>1.4%</td>
<td>0.1%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Need more rain/snow</td>
<td>0.5%</td>
<td>2.3%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Protect water rights</td>
<td>5.0%</td>
<td>2.5%</td>
<td>3.9%</td>
</tr>
</tbody>
</table>

Note: Totals do not equal 100%, because respondents could choose more than one option.

Trusted Sources of Information

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-five percent of respondents indicated that they did.

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure II-17 presents those results.

Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (29%). The next most trusted sources for information were environmental and conservation organizations (18%), Colorado's state government (15%), or the respondent’s local water utility (12%). Approximately 9 percent of respondents selected either Colorado’s
educational institutions or their city or county government as their most trusted source. The least trusted source of information about Colorado’s water-related issues was the Federal government (2%).

**Figure II-17.**
Most trusted sources of information.

The relatively high level of trust in local and regional government entities was also found in the 2010 *Public Perceptions, Preferences and Values for Water in the West* survey by CSU faculty. That survey found that if government was to make conservation decisions, local government was substantially preferred over state government, and state government was substantially preferred over the federal government. At the more specific level, while the 2009 River District survey of district residents found that only 37 percent of residents were familiar with District, 69 percent of those familiar had a favorable impression of the District.
**Demographic distinctions.** The study team examined whether the most trusted sources of information about Colorado’s water-related varied across demographic groups defined by race/ethnicity and age. Figure II-18 presents those results.

**Trusted sources of information, by race/ethnicity.** Compared to white respondents, Hispanics were more likely to indicate that they would most trust their city or county governments for water-related information (13% compared to 8%), and that difference was statistically significant.

Compared to white respondents, Hispanics were less likely to trust Colorado’s water conservancy and water conservation districts (26% compared to 37%), and that difference was statistically significant.

Compared to white respondents, other minorities were less likely to trust environmental or conservation organizations (8% compared to 17%), and that difference was statistically significant.

**Trusted sources of information, by age.** Compared to older respondents — between 35 and 54 (36%) and those 55 or older (37%) — younger respondents between 18 and 34 (28%) were less likely to trust Colorado’s regional water conservancy and water conservation districts for water-related information, and those differences were statistically significant.

Respondents between 35 and 54 were the least likely to indicate that they would trust Colorado’s state government for information about water-related issues (9%).
Figure II-18.
Most trusted sources of information, by demographic.

Note: Asterisks (*) denote statistically significant difference from white at the 95% confidence level; daggers (†) denote statistically significant difference from 18 to 34 years at the 95% confidence level. Totals may not equal 100% due to rounding.

Demographics

The survey collected information about key demographic information, including respondent:

- Age;
- Race/ethnicity;
- Household income; and
- Duration of residence in Colorado.

Those results are reported in Figures II-19 through II-21 on the following pages. The demographic makeup of the survey respondents is representative of the demographic distribution of all Colorado residents aged 18 and older.

**Age.** Figure II-19 presents the age distribution of survey respondents. The survey was open to Colorado residents over the age of 18.

- About 22 percent of survey respondents were between the ages of 18 and 34;
- 42 percent of the sample were between the ages of 35 and 54; and
- 37 percent of respondents were 55 or older.

**Figure II-19.**

*Age distribution of survey respondents*

![Age distribution chart](chart.png)

*Note: n=1,950. Totals may not equal 100% due to rounding.*

*Source: BBC Research & Consulting from Colorado Water Conservation Board household telephone survey conducted November, 2012.*

**Race/ethnicity.** The survey asked respondents to identify their races or ethnicities. Figure II-20 shows that 71 percent of survey respondents indicated that they were white.3 Twenty percent indicated that they were Hispanic; 5 percent said they were Black;4 and 5 percent indicated that they were another race or mixed race.

3 “White” refers to non-Hispanic residents of Caucasian descent.

4 “Black” includes respondents indicating their race was African-American or Negro.
Figure II-20.
Races/ethnicities of survey respondents

Note: n=1,878. Totals may not equal 100% due to rounding.

**Income.** The survey asked respondents to identify their total household incomes for 2011. Figure II-21 shows that 36 percent of respondents indicated that their household incomes were less than $50,000 per year. Twenty-four percent of respondents indicated that their household incomes were between $50,000 and $75,000 a year, and 39 percent said their households earn over $75,000 a year.

Figure II-21.
Total household income of survey respondents

Note: n=1,759. Totals may not equal 100% due to rounding.

**Duration of residence in Colorado.** 86 percent of survey respondents have lived in Colorado for at least 10 years. 14 percent moved to Colorado within the past 10 years from another state or country.
SECTION III.
Survey Results from Central Southeast Region

This section provides detailed information about Central Southeast (SE) survey responses. Telephone surveys were completed with 325 participants who reside in the Central SE region of Colorado. The survey collected responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team compared Central SE regional responses to statewide responses, as appropriate, for each survey question.

Central SE Region

The Central SE region is comprised of the Arkansas Basin, located in southeast Colorado. The Arkansas Basin is the largest river basin in Colorado, covering over 28,000 square miles, and includes Colorado Springs and Pueblo as its largest cities. About 940,000 people lived in the Central SE region in 2011, representing about 19 percent of Colorado’s total population. Figure III-1 presents a map of the Central SE region, as defined in this report.

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1 The Central SE region of Colorado is defined as the Arkansas Basin.
2 Statewide survey responses are reported in Section II.
Knowledge of Colorado Water Use and Issues

The survey asked a series of question to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

Sector that uses the most water. When asked which sector uses the most water in Colorado, Central SE respondents most frequently identified households (34%), as shown in Figure III-2. Compared to statewide respondents (35%), fewer Central SE respondents (32%) identified farms and ranches as the sector that uses the most water, but that difference was not significant. About 30 percent of Central SE respondents said that industrial and commercial businesses use the most water in Colorado.
Figure III-2.
Which sector uses the most water in Colorado?

Note: Totals may not equal 100% due to rounding.


Attention to water issues and water use. As shown in Figure III-3, most Central SE survey respondents (74%) indicated that they pay more attention to water issues today than in the past. About six percent said they paid less attention to water issues today. Those results were similar to statewide respondents, as shown in Figure III-3. A similar majority of regional respondents (75%) indicated they pay more attention to their own water use than they have in the past.

Figure III-3.
Do you pay more or less attention to water issues today?

Note:
Totals may not equal 100% due to rounding.

Source:
**Reasons for paying more attention to water issues.** Of those Central SE respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure III-4 shows the reasons why people are paying more attention to water issues. The most common reasons indicated by Central SE participants are:

- Recent drought or dry year (27%);
- Personal demographic reasons (e.g., older/more aware, have children, moved here from another state) (25%); and
- Water quality issues (e.g., perceived lower quality of water, increase in water pollution/contamination, safety/health concerns) (11%).

Those results were similar to statewide responses. Compared to statewide participants, a smaller share of Central SE participants indicated that they pay more attention to water issues than in the past due to a career or livelihood situation (7% versus 4%), and that difference was statistically significant.

**Figure III-4.**
Reasons why Coloradans pay more attention to water issues than in the past

Note:
Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
**Perceptions of Household Water Service**

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each service is: inexpensive, priced about right, or too expensive. Overall, Central SE respondents consider household water service to be a relatively good value.

Figure III-5 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV, and telephone/cell phone services.

- Sixty-five percent of respondents indicated that water was “inexpensive” or “priced about right,” compared to 35 percent who indicated that water was “too expensive;”
- Forty-seven percent of respondents indicated that energy was “inexpensive” or “priced about right,” compared to 53 percent who indicated that energy was “too expensive;”
- Forty percent of respondents indicated that telephone/cell phone service was “inexpensive” or “priced about right,” compared to 60 percent who indicated that telephone/cell phone service was “too expensive;” and
- Twenty-three percent of respondents indicated that cable or satellite TV was “inexpensive” or “priced about right,” compared to 77 percent who indicated that cable or satellite TV was “too expensive.”

Compared to statewide survey participants (28%), a larger share of Central SE participants (35%) indicated that water was “too expensive,” and that difference is statistically significant.
Figure III-5.
Relative perceptions of home water service

Note:
Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:

Performance of Government Agencies

Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figures III-6 and III-7 presents those results, respectively.

Overall, 48 percent of Central SE respondents agreed or strongly agreed with the statement that “government agencies are doing enough to protect the quality of your drinking water,” though there was not strong support for the statement. The average level of agreement was 6.2 (out of 10), and 22 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Twenty-nine percent of respondents provided an essentially neutral response (rating their level of agreement as 5 or 6 out of 10). Those results were similar to statewide participants.
Central SE response to the statement “government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes” was similar with a level of agreement of 5.8 out of 10. Forty-four percent of respondents agreed or strongly agreed with that statement, and 25 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty-one percent of respondents provided a neutral response. Those results were also similar to statewide participants.

Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:
Colorado has enough water available to meet our current needs; and

Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

**Current water needs.** Figure III-8 shows that, overall, Central SE respondents indicated mild disagreement that Colorado has enough water to meet its current needs. On average, agreement was 4.6 out of 10, and 50 percent of respondents either disagreed or strongly disagreed with that statement. Twenty-four percent of respondents agreed or strongly agreed with the statement, while 25 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

On average, Central SE respondents were less likely to agree that Colorado has enough water to meet our current needs than statewide respondents (4.6 versus 4.9 out of 10), and that difference was statistically significant.

**Figure III-8.**

*Colorado has enough water to meet our current needs.*

![Graph showing current water needs for Central SE and Statewide respondents.](image)

Note: Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


**Water needs for the next 40 years.** Figure III-9 shows that, on average, Central SE Coloradans disagreed that “Colorado has enough water available to meet our needs for the next 40 years.” The average response to this statement in the Central SE region was 3.6 out of 10, and 69 percent of respondents disagreed or strongly disagreed. Only 12 percent agreed or strongly agreed with the statement. Those results were similar to statewide participants.
Colorado has enough water for the next 40 years.

![Figure III-9](image)

Note: Totals may not equal 100% due to rounding.

Looking forward. Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that “Colorado will have enough water available to meet all of its needs in the future.”

Figure III-10 presents those results. On average, Central SE respondents rated their confidence that Colorado will have enough water to meet all of its future needs as 3.9 out of 10. Sixty-one percent of Central SE respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs.

Sixteen percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs, while 24 percent of Central SE respondents provided a neutral response (rating their confidence as 5 or 6 out of 10). Those results were similar to statewide participants.

![Figure III-10](image)

Note: Totals may not equal 100% due to rounding.
Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado’s cities and towns;
- Amount of water available for Colorado’s farms and ranches;
- Amount of water for recreational use such as boating, rafting, and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams, and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure III-11 presents the reported level of concern for each issue. On average, the amount of water available for Colorado’s farms and ranches received the highest rating of concern (7.1 out of 10) from Central SE participants. Central SE respondents were least concerned with the amount of water available for recreational use such as boating, rafting, and fishing. Overall, Central SE responses were similar to those for statewide participants.
Figure III-11.
Water-related issues.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Central SE (n=319)</th>
<th>Statewide (n=1986)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of water available for Colorado’s farms and ranches</td>
<td></td>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>Central SE</td>
<td>9.6% 8.8% 20.7%</td>
<td>37.1% 33.2%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>4.5% 10.6% 23.5%</td>
<td>32.4% 29.1%</td>
<td></td>
</tr>
<tr>
<td>Amount of water available for Colorado’s cities and towns</td>
<td></td>
<td></td>
<td>6.9</td>
</tr>
<tr>
<td>Central SE</td>
<td>9.9% 10.6% 24.5%</td>
<td>30.1% 28.9%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>9.9% 10.7% 25.5%</td>
<td>33.5% 24.4%</td>
<td></td>
</tr>
<tr>
<td>Water quality in our rivers, lakes, and streams</td>
<td></td>
<td></td>
<td>6.6</td>
</tr>
<tr>
<td>Central SE</td>
<td>9.3% 8.1% 23.7%</td>
<td>35.8% 23.4%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>7.8% 9.6% 24.5%</td>
<td>34.3% 23.9%</td>
<td></td>
</tr>
<tr>
<td>Condition of underground water pipes, dams, and other water utility infrastructure</td>
<td></td>
<td></td>
<td>6.4</td>
</tr>
<tr>
<td>Central SE</td>
<td>7.1% 12.0% 30.4%</td>
<td>20.2% 20.4%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>6.9% 12.7% 28.0%</td>
<td>20.2% 20.4%</td>
<td></td>
</tr>
<tr>
<td>Amount of water for fish and wildlife</td>
<td></td>
<td></td>
<td>6.3</td>
</tr>
<tr>
<td>Central SE</td>
<td>9.6% 12.4% 26.9%</td>
<td>20.4% 20.4%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>8.7% 11.2% 28.7%</td>
<td>22.0% 22.0%</td>
<td></td>
</tr>
<tr>
<td>The quality of the water you receive at your home</td>
<td></td>
<td></td>
<td>6.3</td>
</tr>
<tr>
<td>Central SE</td>
<td>19.2% 11.3% 13.6%</td>
<td>33.4% 22.6%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>17.5% 11.1% 13.8%</td>
<td>35.5% 22.2%</td>
<td></td>
</tr>
<tr>
<td>Effects of energy development on water quality</td>
<td></td>
<td></td>
<td>6.2</td>
</tr>
<tr>
<td>Central SE</td>
<td>9.8% 9.5% 32.7%</td>
<td>18.7% 29.2%</td>
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</tr>
<tr>
<td>Statewide</td>
<td>10.4% 11.4% 28.9%</td>
<td>20.5% 20.9%</td>
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</tr>
<tr>
<td>Amount of water used for energy development</td>
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<td>5.5</td>
</tr>
<tr>
<td>Central SE</td>
<td>12.4% 15.7% 39.9%</td>
<td>13.4% 18.8%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>11.6% 14.2% 37.6%</td>
<td>14.9% 21.7%</td>
<td></td>
</tr>
<tr>
<td>Amount of water for recreational use such as boating, rafting, and fishing</td>
<td></td>
<td></td>
<td>5.3</td>
</tr>
<tr>
<td>Central SE</td>
<td>15.2% 16.7% 32.5%</td>
<td>25.7% 9.9%</td>
<td></td>
</tr>
<tr>
<td>Statewide</td>
<td>16.9% 17.8% 34.4%</td>
<td>20.6% 10.5%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Totals may not equal 100% due to rounding.

**Willingness to pay.** The survey asked participants whether they would be willing to pay an additional $1, $5, $10, or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure III-12 presents those results for Central SE and statewide survey respondents. Survey results indicate that most Central SE Coloradans would be willing to pay an additional charge to address water-related concerns.

- Fifty-seven percent of respondents indicated that they would be willing to pay an additional $1 per month;
- Forty-nine percent of respondents indicated that they would be willing to pay an additional $5 per month;
- Forty-two percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- Twenty-eight percent indicated that they would be willing to pay an additional $25 per month.

On average, Central SE households would be willing to pay between $1 and $5 per month to address a variety of potential concerns identified in the survey.

Figure III-12 also shows that, compared to statewide respondents, Central SE respondents are less willing to pay an additional charge to address water-related concerns. Fifty-seven percent of Central SE participants would be willing to pay an additional $1 per month compared to 66 percent of statewide participants, and that difference was statistically significant. Significantly fewer Central SE households were also willing to pay an additional $10 or $25 per month than statewide participants.

**Figure III-12.**

**Willingness to pay more to address water-related issues**

Note:

Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level.

Source:

**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure III-13, Central SE respondents most frequently indicated that the amount of water for Colorado’s cities and towns was the most important potential water-related issue that needs to be addressed (23%). Compared to statewide respondents (18%), Central SE respondents were more likely to be concerned with the amount of water for cities and towns, and that difference was statistically significant. The second and third most frequently identified most important issues by Central SE Coloradans were:

- The quality of water you receive in your home (22%); and
- Amount of water available for Colorado’s farms and ranches (21%).

Central SE respondents (15%) were more likely to be concerned with the condition of underground water infrastructure than statewide respondents (10%), and that difference was statistically significant.

*Figure III-13. Most important water-related issue*

Note: Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

**Addressing the most important water-related issues.** Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure III-14 presents those results.

Overall, Central SE respondents most frequently indicated that their most important potential water-related issue should be addressed by prioritizing environmental needs (16%). Central SE respondents also frequently indicated that their most important concerns should be addressed by:

- Conservation (15%); or
- Developing new projects/building more dams or reservoirs (15%).

Overall, Central SE responses were similar to those for statewide participants. A relatively larger share of statewide participants indicated that their most important water-related issue should be addressed through conservation than Central SE participants, but that difference was not statistically significant. Compared to statewide participants, a smaller share of Central SE participants indicated that water-related issues should be addressed through education and by limiting fracking and energy developments. Those differences, shown in Figure III-14, are statistically significant.
Figure III-14.
What should be done to address the most important water concerns?

Note:
Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
**Trusted Sources of Information**

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-six percent of Central SE respondents indicated that they did. That result was similar to statewide participants (95%).

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure III-15 presents those results.

Central SE Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (30%). The next most trusted sources for information identified by Central SE participants were local water utilities (23%) or environmental or conservation organizations (13%), or the respondent’s local water utility (12%). Eleven percent of Central SE respondents selected either their city or county government or Colorado’s state government as their most trusted source. The least trusted source of information about Colorado’s water-related issues was the Federal government (2%).

Compared to statewide participants, Central SE participants were more likely to trust their local water utilities for water-related information (23% versus 12%), and were less likely to indicate that they most trusted Colorado’s state government (11% versus 15%). Those differences were statistically significant.

Figure III-15.
Most trusted sources of information

Note: Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

SECTION IV.
Survey Results from Metro Denver Region

This section provides detailed information about Metro Denver survey responses. Telephone surveys were completed with 325 participants who reside in the Metro Denver region of Colorado. The survey collected responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team compared Metro Denver regional responses to statewide responses, as appropriate, for each survey question.

**Metro Denver Region**

The Metro Denver region is comprised of the Metro Roundtable, located in north central Colorado. The Metro Denver region is the smallest of the six regions in geographical area, but the largest in population. Over 2.4 million people lived in the Metro Denver region in 2011, accounting for about 49 percent of Colorado’s total population. Figure IV-1 presents a map of the Metro Denver region, as defined in this report.

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1 The Metro Denver region is located in the South Platte Basin, but is treated as a separate region in this study (and has a separate Roundtable water planning group).

2 Statewide survey responses are reported in Section II.
Knowledge of Colorado Water Use and Issues

The survey asked a series of question to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

Sector that uses the most water. When asked which sector uses the most water in Colorado, Metro Denver respondents most frequently identified households (33%), as shown in Figure IV-2. Compared to statewide respondents (35%), fewer Metro Denver respondents (31%) correctly identified farms and ranches as the sector that uses the most water, but that difference was not statistically significant. About 33 percent of Metro Denver respondents said that industrial and commercial businesses use the most water in Colorado.
**Figure IV-2.**
Which sector uses the most water in Colorado?

Note: Totals may not equal 100% due to rounding.

**Attention to water issues and water use.** As shown in Figure IV-3, most survey Denver Metro survey respondents (68%) indicated that they pay more attention to water issues today than in the past. About 5 percent said they paid less attention to water issues today. The proportion of Denver Metro residents indicating they pay more attention to water issues now is lower than the statewide average, as shown in Figure IV-3, but the difference is not statistically significant. A larger majority of Denver Metro respondents (73%) indicated they pay more attention to their own water use than they have in the past.

**Figure IV-3.**
Do you pay more or less attention to water issues today?

Note:
Totals may not equal 100% due to rounding.
Source:
**Reasons for paying more attention to water issues.** Of those Metro Denver respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure IV-4 shows the reasons why people are paying more attention to water issues. The most common reasons indicated by Metro Denver participants are:

- Recent drought or dry year (26%);
- Personal demographic reasons (e.g., older/more aware, have children, moved here from another state) (25%); and
- Water quality issues (e.g., perceived lower quality of water, increase in water pollution/contamination, safety/health concerns) (16%).

Those results were similar to statewide responses. Compared to statewide participants, a smaller share of Metro Denver participants indicated that they pay more attention to water issues than in the past due to a career or livelihood situation (5% versus 7%), and that difference was statistically significant.

**Figure IV-4.**
*Reasons why Coloradans pay more attention to water issues than in the past*

Note: Totals do not equal 100%, because respondents could choose more than one option.

Perceptions of Household Water Service

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each service is: inexpensive, priced about right, or too expensive. Overall, Metro Denver respondents consider household water service to be a relatively good value.

Figure IV-5 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV, and telephone/cell phone services.

- Sixty-two percent of Metro Denver respondents indicated that water was “inexpensive” or “priced about right,” compared to 28 percent who indicated that water was “too expensive;”
- Fifty-two percent of respondents indicated that energy was “inexpensive” or “priced about right,” compared to 48 percent who indicated that energy was “too expensive;”
- Forty-one percent of respondents indicated that telephone/cell phone service was “inexpensive” or “priced about right,” compared to 59 percent who indicated that telephone/cell phone service was “too expensive;” and
- Fourteen percent of respondents indicated that cable or satellite TV was “inexpensive” or “priced about right,” compared to 86 percent who indicated that cable or satellite TV was “too expensive.”

The proportion of Metro Denver participants (28%) that indicated that water was “too expensive” was the same as the statewide proportion of respondents providing this response.
Figure IV-5. Relative perceptions of home water service

Note: Asterisks (*) denote a statistically significant difference between Metro Denver and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


Performance of Government Agencies

Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figures IV-6 and IV-7 presents those results, respectively.

Overall, 48 percent of Metro Denver respondents agreed or strongly agreed with the statement that “government agencies are doing enough to protect the quality of your drinking water,” though there was not strong support for the statement. The average level of agreement was 6.2 (out of 10), and 21 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty-two percent of respondents provided an essentially neutral response.
(rating their level of agreement as 5 or 6 out of 10). Those results were similar to statewide participants.

**Figure IV-6.**
Government agencies are doing enough to protect the quality of your drinking water.

![Graph showing Metro Denver and statewide responses to water quality protection.]

Note: Totals may not equal 100% due to rounding.

Metro Denver responses to the statement “government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes” was similar with a level of agreement of 6.0 out of 10. Forty-four percent of respondents agreed or strongly agreed with that statement, and 23 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty-three percent of respondents provided a neutral response. Those results were also similar to statewide participants.

**Figure IV-7.**
Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

![Graph showing Metro Denver and statewide responses to water protection in streams, rivers, and lakes.]

Note: Totals may not equal 100% due to rounding.
Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:

- Colorado has enough water available to meet our current needs; and
- Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

**Current water needs.** Figure IV-8 shows that, overall, Metro Denver respondents indicated mild disagreement that Colorado has enough water to meet its current needs. On average, agreement was 5.0 out of 10, and 44 percent of respondents either disagreed or strongly disagreed with that statement. Thirty-two percent of respondents agreed or strongly agreed with the statement, while 24 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

On average, Metro Denver respondents were slightly more likely to agree that Colorado has enough water to meet our current needs than statewide respondents (5.0 versus 4.9 out of 10), but that difference was not statistically significant.

**Figure IV-8. Colorado has enough water to meet our current needs.**

![Bar Chart](image)

Note: Totals may not equal 100% due to rounding.


**Water needs for the next 40 years.** Figure IV-9 shows that, on average, Metro Denver respondents disagreed that “Colorado has enough water available to meet our needs for the next 40 years.” The average response to this statement in the Metro Denver region was 3.6 out of 10, and 66 percent of respondents disagreed or strongly disagreed. Only 13 percent agreed or strongly agreed with the statement. Those results were similar to statewide participants.
Looking forward. Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that “Colorado will have enough water available to meet all of its needs in the future.”

Figure IV-10 presents those results. On average, Metro Denver respondents rated their confidence that Colorado will have enough water to meet all of its future needs as 4.1 out of 10. Fifty-eight percent of Metro Denver respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs.

Seventeen percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs, while 25 percent of Metro Denver respondents provided a neutral response (rating their confidence as 5 or 6 out of 10). Those results were generally similar to the statewide results.

Figure IV-10. Colorado will have enough water to meet our future needs.

Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado’s cities and towns;
- Amount of water available for Colorado’s farms and ranches;
- Amount of water for recreational use such as boating, rafting, and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams, and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure IV-11 presents the reported level of concern for each issue. On average, the amount of water available for Colorado’s farms and ranches and the amount of water available for Colorado’s cities and towns received the highest ratings of concern (6.8 out of 10) from Metro Denver participants. Metro Denver respondents were least concerned with the amount of water available for recreational use such as boating, rafting, and fishing.

Although the Metro Denver respondents’ rating of concern over the amount of water available for Colorado’s cities and towns was slightly higher than the statewide average, and their rating of concern about the amount of water available for Colorado’s farms and ranches was slightly lower, these differences were not statistically significant. Overall, Metro Denver responses were similar to those for statewide participants.
Figure IV-11.
Water-related issues.

**Willingness to pay.** The survey asked participants whether they would be willing to pay an additional $1, $5, $10, or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure IV-12 presents those results for Metro Denver and statewide survey respondents. Survey results indicate that most Metro Denver Coloradans would be willing to pay an additional charge to address water-related concerns.

- Sixty-seven percent of respondents indicated that they would be willing to pay an additional $1 per month;
- Fifty-four percent of respondents indicated that they would be willing to pay an additional $5 per month;
- Fifty percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- Thirty-eight percent indicated that they would be willing to pay an additional $25 per month.

On average, Metro Denver households would be willing to pay about $10 per month to address a variety of potential concerns identified in the survey.

Figure IV-12 also shows that, compared to statewide respondents, Metro Denver respondents are somewhat more willing to pay larger charges to address water-related concerns. These differences, however, were not statistically significant.

![Figure IV-12. Willingness to pay more to address water-related issues](source: BBC Research & Consulting from Colorado Water Conservation Board household telephone survey conducted November, 2012.)
**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure IV-13, Metro Denver respondents most frequently indicated that the quality of water received at home was the most important potential water-related issue that needs to be addressed (27%). The second and third most frequently identified most important issues by Metro Denver residents were:

- The amount of water available for Colorado’s cities and towns (19%); and
- Amount of water available for Colorado’s farms and ranches (17%).

Compared to statewide respondents (21%), Metro Denver respondents were less likely to identify the amount of water available for Colorado’s farms and ranches as the most important concern (17%), but that difference was not statistically significant.

**Figure IV-13.**
**Most important water-related issue**

Note: Totals may not equal 100% due to rounding.

**Addressing the most important water-related issues.** Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure IV-14 presents those results.

Overall, Metro Denver respondents most frequently indicated that their most important potential water-related issue should be addressed through conservation (20%), though the response to this question differed depending on which water-related issue respondents felt was most important. Metro Denver respondents also frequently indicated that their most important concerns should be addressed by:

- Prioritizing environmental needs (14%); or
- Developing new projects/building more dams or reservoirs (12%).

Overall, Metro Denver responses were similar to those for statewide participants. A relatively larger share of statewide participants indicated that their most important water-related issue should be addressed through developing new projects than Metro Denver participants, but that difference was not statistically significant.
Figure IV-14.
What should be done to address the most important water concerns?

Note:
Totals do not equal 100%, because respondents could choose more than one option.

Source:
**Trusted Sources of Information**

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-four percent of Metro Denver respondents indicated that they did. That result was similar to statewide participants (95%).

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure IV-15 presents those results.

Metro Denver Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (27%). The next most trusted sources for information identified by Metro Denver participants were environmental or conservation organizations (19%) and state government (19%). As in the statewide results, the least trusted source of information about Colorado’s water-related issues was the Federal government (3%).

Compared to statewide participants, Metro Denver participants were less likely to indicate that their most trusted source of information was their local water utility (8% versus 12%), and that difference was statistically significant.

**Figure IV-15. Most trusted sources of information**

Note:
Asterisks (*) denote a statistically significant difference between Central SE and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:
SECTION V.
Survey Results from Northeast Region

This section provides detailed information about survey responses from the Northeast region. Telephone surveys were completed with 325 participants who reside in the Northeast region of Colorado. The survey collected responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team compared Northeast regional responses to statewide responses, as appropriate, for each survey question.

Northeast Region

The Northeast region is comprised of the North Platte Basin and the South Platte Basin, excluding the Denver Metro region. The Northeast region is the second largest region in geographic area (after the Central SE region), and the second largest in population (after Denver Metro) with approximately 980,000 residents in 2011. The largest cities in the Northeast region include Boulder, Fort Collins and Greeley, though much of the region is comprised of agricultural lands. All but one of the 325 survey responses for this region were from residents of the South Platte Basin, which also makes up over 99.8 percent of the region’s population.

Figure V-1 presents a map of the Northeast region, as defined in this report.

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1 The Northeast Region of Colorado is defined as the South Platte Basin, excluding the Denver Metro area.

2 Statewide survey responses are reported in Section II.
Knowledge of Colorado Water Use and Issues

The survey asked a series of question to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

**Sector that uses the most water.** When asked which sector uses the most water in Colorado, Northeast respondents most frequently identified farms and ranches (40%), as shown in Figure V-2. The proportion of Northeast Colorado residents that correctly identified agriculture as the state’s largest water user was higher than the statewide proportion of survey respondents (35%), but that difference was not significant. About 28 percent of Central SE respondents said that households use the most water, and about 27 percent said that industrial and commercial businesses use the most water in Colorado.
Figure V-2.
Which sector uses the most water in Colorado?

Note: Totals may not equal 100% due to rounding.

Attention to water issues and water use. As shown in Figure V-3, most Northeast survey respondents (77%) indicated that they pay more attention to water issues today than in the past. This proportion is higher than the statewide average, as shown in Figure V-3, and the difference is statistically significant. About four percent of Northeast respondents said they paid less attention water issues today than in the past. Compared to attention to water issues, a lower proportion of Northeast respondents (72%) indicated they pay more attention to their own water use than they have in the past.

Figure V-3.
Do you pay more or less attention to water issues today?

Note:
Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Reasons for paying more attention to water issues. Of those Northeast respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure V-4 shows the reasons why people are paying more attention to water issues. Apart from the catchall category of “other”, the most common reasons indicated by Northeast participants are:

- Recent drought or dry year (27%);
- Personal demographic reasons (e.g., older/more aware, have children, moved here from another state) (20%);
- Career/livelihood situation (10%); and
- Water quantity issues (10%).

Those results were generally similar to statewide responses. Compared to statewide participants, a smaller share of Northeast participants indicated that they pay more attention to water issues than in the past due to population growth (5% versus 8%), and that difference was statistically significant.

Figure V-4. Reasons why Coloradans pay more attention to water issues than in the past

Note: Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Perceptions of Household Water Service

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each service is: inexpensive, priced about right, or too expensive. Overall, Northeast respondents consider household water service to be a relatively good value.

Figure V-5 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV, and telephone/cell phone services.

- Seventy-four percent of Northeast respondents indicated that water was "inexpensive" or "priced about right," compared to 26 percent who indicated that water was "too expensive;"
- Sixty percent of respondents indicated that energy was "inexpensive" or "priced about right," compared to 40 percent who indicated that energy was "too expensive;"
- Thirty-nine percent of respondents indicated that telephone/cell phone service was "inexpensive" or "priced about right," compared to 61 percent who indicated that telephone/cell phone service was "too expensive;" and
- Thirty-one percent of respondents indicated that cable or satellite TV was "inexpensive" or "priced about right," compared to 69 percent who indicated that cable or satellite TV was "too expensive."

Compared to statewide survey participants (48%), a smaller share of Northeast participants (40%) indicated that energy was "too expensive." Similarly, a smaller share of Northeast participants considered cable/satellite TV to be too expensive (69%) than among statewide respondents (80%). Both of those differences were statistically significant.
**Figure V-5.**
Relative perceptions of home water service

Note:
Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:

**Performance of Government Agencies**
Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figures V-6 and V-7 presents those results, respectively.

Overall, 47 percent of Northeast respondents agreed or strongly agreed with the statement that “government agencies are doing enough to protect the quality of your drinking water,” though there was not strong support for the statement. The average level of agreement was 6.0 (out of 10), and 25 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Twenty-eight percent of respondents provided an essentially neutral response.
(rating their level of agreement as 5 or 6 out of 10). Those results were similar to statewide participants.

**Figure V-6.**
Government agencies are doing enough to protect the quality of your drinking water.

Central SE response to the statement “government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes” was similar with a level of agreement of 6.1 out of 10. Forty-eight percent of respondents agreed or strongly agreed with that statement, and 22 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty percent of respondents provided a neutral response. Those results were also similar to statewide participants.

**Figure V-7.**
Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.
Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:

- Colorado has enough water available to meet our current needs; and
- Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

Current water needs. Figure V-8 shows that, overall, Northeast respondents indicated mild disagreement that Colorado has enough water to meet its current needs. On average, agreement was 4.7 out of 10, and 46 percent of respondents either disagreed or strongly disagreed with that statement. Twenty-seven percent of respondents agreed or strongly agreed with the statement, while 27 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

On average, Northeast respondents were slightly less likely to agree that Colorado has enough water to meet our current needs than statewide respondents (4.7 versus 4.9 out of 10), but that difference was not statistically significant.

Figure V-8.
Colorado has enough water to meet our current needs.

Water needs for the next 40 years. Figure V-9 shows that, on average, Northeast Coloradans disagreed that “Colorado has enough water available to meet our needs for the next 40 years.” The average response to this statement in the Northeast region was 3.4 out of 10, and 70 percent of respondents disagreed or strongly disagreed. The proportion of Northeast respondents strongly disagreeing with this statement (47%) was higher than the statewide average (40%), and that difference was statistically significant. Only 13 percent of Northeast respondents agreed or strongly agreed with the statement.
Figure V-9. Colorado has enough water for the next 40 years.

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Note: Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


Looking forward. Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that "Colorado will have enough water available to meet all of its needs in the future."

Figure V-10 presents those results. On average, Northeast respondents rated their confidence that Colorado will have enough water to meet all of its future needs as 4.0 out of 10. Fifty-seven percent of Northeast respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs.

Eighteen percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs, while 25 percent of Northeast respondents provided a neutral response (rating their confidence as 5 or 6 out of 10). Those results were similar to statewide participants.

Figure V-10. Colorado will have enough water to meet our future needs.

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Note: Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado’s cities and towns;
- Amount of water available for Colorado’s farms and ranches;
- Amount of water for recreational use such as boating, rafting, and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams, and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure V-11 presents the reported level of concern for each issue. On average, the amount of water available for Colorado’s farms and ranches received the highest rating of concern (7.0 out of 10) from Northeast participants. The region’s respondents were least concerned with the amount of water available for recreational use such as boating, rafting, and fishing. While Northeast responses were generally similar to those for statewide participants, the region’s ratings of concern for the following issues were lower than the statewide average – and the differences were statistically significant:

- Water quality in our rivers, lakes and streams;
- Amount of water for fish and wildlife; and
- The quality of water you receive at your home.
Figure V-11.
Water-related issues.

Note: Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level.

**Willingness to pay.** The survey asked participants whether they would be willing to pay an additional $1, $5, $10, or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure V-12 presents those results for Northeast and statewide survey respondents. Survey results indicate that most residents of the Northeast region would be willing to pay an additional charge to address water-related concerns.

- Seventy-one percent of respondents indicated that they would be willing to pay an additional $1 per month;
- Sixty percent of respondents indicated that they would be willing to pay an additional $5 per month;
- Forty-five percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- Thirty-four percent indicated that they would be willing to pay an additional $25 per month.

On average, Northeast households would be willing to pay at least $10 per month to address a variety of potential concerns identified in the survey.

Figure V-12 also shows that, compared to statewide respondents, Northeast respondents are more willing pay additional charges of up to $10 per month to address water-related concerns. The proportion of Northeast residents willing to pay either $5 or $10 per month was 6 to 7 percent higher than the statewide average, and those differences were statistically significant.

**Figure V-12. Willingness to pay more to address water-related issues**

Note: Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level.

**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure V-13, Northeast respondents most frequently indicated that the amount of water for Colorado’s cities and towns was the most important potential water-related issue that needs to be addressed (26%). Compared to statewide respondents (7%), Northeast respondents were more likely to be concerned about the effects of energy development on water quality (11%), and that difference was statistically significant. The second and third most frequently identified most important issues by Northeast Coloradans were:

- The quality of water you receive in your home (22%); and
- Amount of water available for Colorado’s cities and towns (16%).

Other differences between the proportions of Northeast respondents identifying the various issues as the most important and the statewide proportions of respondents identifying those issues were not statistically significant.

*Figure V-13. Most important water-related issue*

Note: Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

**Addressing the most important water-related issues.** Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure V-14 presents those results.

Overall, Northeast respondents most frequently indicated that their most important potential water-related issue should be addressed through conservation (20%). Northeast respondents also frequently indicated that their most important concerns should be addressed by:

- Developing new projects/building more dams or reservoirs (17%); and
- Prioritizing environmental needs (13%).

While Northeast responses were generally similar to those for statewide participants, a smaller proportion of regional respondents suggested limiting growth (3%) than among statewide respondents (6%). That difference, shown in Figure V-14, was statistically significant.
Figure V-14.
What should be done to address the most important water concerns?

Note:
Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
**Trusted Sources of Information**

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-five percent of Northeast respondents indicated that they did. That result was the same as among statewide participants.

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure V-15 presents those results.

Northeast Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (30%). The next most trusted sources for information identified by Northeast participants were environmental or conservation organizations (18%), and their local water utilities (12%).

Compared to statewide participants, Northeast participants were less likely to indicate that their most trusted source was Colorado’s state government (11% versus 15%). That difference was statistically significant.

**Figure V-15.**
**Most trusted sources of information**

Note:
Asterisks (*) denote a statistically significant difference between Northeast and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:
SECTION VI.
Survey Results from San Luis Region

This section provides detailed information about survey responses from the San Luis region. Telephone surveys were completed with 325 participants who reside in the San Luis Valley in Colorado. The survey collected responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team compared San Luis regional responses to statewide responses, as appropriate, for each survey question.

San Luis Region

The San Luis region is comprised of the San Luis Valley, located in south central Colorado. The San Luis region contains the headwaters of the Rio Grande River and was the first part of Colorado settled by immigrants of European descent. The San Luis region is the second smallest of the six regions defined for this study in terms of geographic area and has the smallest population among the regions with approximately 41,000 residents in 2011. Alamosa is the largest city in the San Luis region. Figure VI-1 presents a map of the San Luis region, as defined in this report.

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1 The San Luis region of Colorado is defined as the San Luis Valley and contains the Rio Grande Basin.

2 Statewide survey responses are reported in Section II.
Knowledge of Colorado Water Use and Issues

The survey asked a series of questions to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

Sector that uses the most water. When asked which sector uses the most water in Colorado, San Luis respondents most frequently (and correctly) identified farms and ranches (58%), as shown in Figure VI-2. Compared to statewide respondents (32%), fewer San Luis respondents (21%) identified households as the sector that uses the most water. The proportion of San Luis residents indicating that industrial and commercial businesses use the most water in Colorado (17%) was also far lower than the statewide proportion giving this response (30%). All of these differences were statistically significant.
Figure VI-2.
Which sector uses the most water in Colorado?

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


Attention to water issues and water use. As shown in Figure VI-3, most survey San Luis respondents (84%) indicated that they pay more attention to water issues today than in the past. That proportion is significantly higher than the statewide average response (72%). Only one percent of residents in the San Luis region said they paid less attention water issues today. Those results are shown in Figure VI-3. A large majority of San Luis respondents (77%) also indicated they pay more attention to their own water use than they have in the past.

Figure VI-3.
Do you pay more or less attention to water issues today?

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

**Reasons for paying more attention to water issues.** Of those San Luis respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure VI-4 shows the reasons why people are paying more attention to water issues. The most common reasons indicated by San Luis participants (excluding "other") are:

- Recent drought or dry year (34%);
- Water quantity issues (16%); and
- Career/livelihood situation (15%).

Each of these proportions was significantly higher than the statewide average. Compared to statewide participants, a smaller share of San Luis participants indicated their demographic situation, water quality issues, news/education or population growth were the reasons why they pay more attention to water issues than in the past. These differences were also statistically significant.

**Figure VI-4.**
Reasons why Coloradans pay more attention to water issues than in the past

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
Perceptions of Household Water Service

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each service is: inexpensive, priced about right, or too expensive. Overall, San Luis respondents consider household water service to be a relatively good value.

Figure VI-5 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV, and telephone/cell phone services.

- Seventy-two percent of respondents indicated that water was “inexpensive” or “priced about right,” compared to 28 percent who indicated that water was “too expensive;”
- Sixty-one percent of respondents indicated that energy was “inexpensive” or “priced about right,” compared to 39 percent who indicated that energy was “too expensive;”
- Thirty-seven percent of respondents indicated that telephone/cell phone service was “inexpensive” or “priced about right,” compared to 63 percent who indicated that telephone/cell phone service was “too expensive;” and
- Thirty-four percent of respondents indicated that cable or satellite TV was “inexpensive” or “priced about right,” compared to 66 percent who indicated that cable or satellite TV was “too expensive.”

Compared to statewide survey participants San Luis survey participants were significantly less likely to indicate that energy or cable/satellite TV was “too expensive.”
Figure VI-5.
Relative perceptions of home water service

Note:
Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:

Performance of Government Agencies

Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means "completely disagree" and 10 means "completely agree," respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figures VI-6 and VI-7 presents those results, respectively.

Overall, 44 percent of San Luis respondents agreed or strongly agreed with the statement that "government agencies are doing enough to protect the quality of your drinking water," though there was not strong support for the statement. The average level of agreement was 5.8 (out of 10), and 28 percent of respondents indicated that they disagreed or strongly disagreed with that statement. In particular, the proportion of San Luis residents indicating that they "strongly disagreed" with this statement (15%) was significantly greater than the statewide average (9%).
Twenty-nine percent of respondents provided an essentially neutral response (rating their level of agreement as 5 or 6 out of 10). That result was similar to statewide participants.

**Figure VI-6.**
Government agencies are doing enough to protect the quality of your drinking water.

San Luis response to the statement “government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes” was similar with a level of agreement of 5.8 out of 10. Forty-five percent of respondents agreed or strongly agreed with that statement, and 26 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty-one percent of respondents provided a neutral response. These results were similar to statewide participants.

**Figure VI-7.**
Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Note: Totals may not equal 100% due to rounding.

Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:

- Colorado has enough water available to meet our current needs; and
- Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

Current water needs. Figure VI-8 shows that, overall, San Luis respondents indicated substantial disagreement that Colorado has enough water to meet its current needs. On average, agreement was 3.8 out of 10, which is significantly lower than the statewide average level of agreement of 4.9. Sixty-two percent of respondents either disagreed or strongly disagreed with that statement, including 42 percent who strongly disagreed – significantly higher than the statewide proportion indicating strong disagreement (22%). Seventeen percent of San Luis respondents agreed or strongly agreed with the statement, while 21 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

Water needs for the next 40 years. Figure VI-9 shows that, on average, San Luis residents also strongly disagreed that “Colorado has enough water available to meet our needs for the next 40 years.” The average level of agreement with this statement in the San Luis region was 2.7 out of 10, and 81 percent of respondents disagreed or strongly disagreed. Only 7 percent agreed or strongly agreed with the statement. San Luis residents were significantly more likely to disagree or strongly disagree that Colorado has enough water available to meet its future needs than statewide respondents.
Figure VI-9.
Colorado has enough water for the next 40 years.

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


Looking forward. Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that “Colorado will have enough water available to meet all of its needs in the future.”

Figure VI-10 presents those results. On average, San Luis respondents rated their confidence that Colorado will have enough water to meet all of its future needs as 3.2 out of 10. Seventy percent of San Luis respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs. Eleven percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs, while 19 percent of San Luis respondents provided a neutral response (rating their confidence as 5 or 6 out of 10).

Overall, San Luis residents had significantly less confidence that Colorado will have enough water available to meet its future needs than statewide survey respondents.

Figure VI-10.
Colorado will have enough water to meet our future needs.

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado’s cities and towns;
- Amount of water available for Colorado’s farms and ranches;
- Amount of water for recreational use such as boating, rafting, and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams, and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure VI-11 presents the reported level of concern for each issue. On average, the amount of water available for Colorado’s farms and ranches received the highest rating of concern (8.0 out of 10) from San Luis participants. San Luis respondents were least concerned with the amount of water available for recreational use such as boating, rafting, and fishing. Overall, San Luis residents indicated significantly higher levels of concern than statewide participants regarding three issues:

- Amount of water available for Colorado’s farms and ranches;
- Water quality in our rivers, lakes and streams; and
- Amount of water used for energy development.
Figure VI-11.
Water-related issues.

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<th>Statewide (n=1938)</th>
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<td>Not concerned</td>
<td>6.5% 5.6%* 11.4%*</td>
<td>4.5% 10.4% 23.5%</td>
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<tr>
<td>Little concern</td>
<td>20.4%*</td>
<td>23.5%</td>
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<tr>
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<td>56.2%*</td>
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<td>Very concerned</td>
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<td>29.0%</td>
</tr>
<tr>
<td>Mean</td>
<td>8.0 *</td>
<td>7.0</td>
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| **Water quality in our rivers, lakes, and streams** |                  |                    |
| San Luis (n=324) | 6.2% 5.5%* 24.7% | 9.6% 24.5% 24.5%    |
| Statewide (n=1938)| 23.5%            | 34.3%              |
| Mean             | 7.1 *            | 6.6                |

| **Amount of water available for Colorado’s cities and towns** |                  |                    |
| San Luis (n=321) | 8.7% 10.2% 27.4% | 9.0% 12.7% 28.0%    |
| Statewide (n=1928)| 25.5%            | 30.8%              |
| Mean             | 6.6              | 6.4                |

| **Condition of underground water pipes, dams, and other water utility infrastructure** |                  |                    |
| San Luis (n=311) | 7.4% 10.6% 28.3% | 6.9% 12.7% 28.0%    |
| Statewide (n=1808)| 28.3%            | 30.2%              |
| Mean             | 6.6              | 6.4                |

| **The quality of the water you receive at your home** |                  |                    |
| San Luis (n=323) | 21.1% 7.7% 13.0% | 17.5% 11.1% 13.8%    |
| Statewide (n=1941)| 23.5%            | 22.2%              |
| Mean             | 6.5              | 6.5                |

| **Amount of water for fish and wildlife** |                  |                    |
| San Luis (n=323) | 9.9% 12.4% 23.2%* | 8.7% 11.2% 28.7%    |
| Statewide (n=1937)| 31.6%            | 29.4%              |
| Mean             | 6.4              | 6.4                |

| **Effects of energy development on water quality** |                  |                    |
| San Luis (n=301) | 9.8% 11.7% 29.0% | 10.4% 11.4% 28.9%    |
| Statewide (n=1881)| 22.1%*           | 27.4%*             |
| Mean             | 6.4              | 6.2                |

| **Amount of water used for energy development** |                  |                    |
| San Luis (n=301) | 8.0%* 12.3% 34.6% | 11.6% 14.2% 37.6%    |
| Statewide (n=1833)| 21.6%            | 21.7%              |
| Mean             | 6.3 *            | 5.7                |

| **Amount of water for recreational use such as boating, rafting, and fishing** |                  |                    |
| San Luis (n=322) | 18.0% 16.1% 31.7% | 16.9% 17.6% 34.4%    |
| Statewide (n=1932)| 20.5%            | 20.6%              |
| Mean             | 5.3              | 5.2                |

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level.

**Willingness to pay.** The survey asked participants whether they would be willing to pay an additional $1, $5, $10, or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure VI-12 presents those results for San Luis and statewide survey respondents. Survey results indicate that most San Luis residents would be willing to pay a small additional charge to address water-related concerns.

- Fifty-seven percent of respondents indicated that they would be willing to pay an additional $1 per month;
- Forty-three percent of respondents indicated that they would be willing to pay an additional $5 per month;
- Thirty-six percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- Eighteen percent indicated that they would be willing to pay an additional $25 per month.

On average, San Luis households would be willing to pay between $1 and $5 per month to address a variety of potential concerns identified in the survey.

Figure VI-12 also shows that, compared to statewide respondents, San Luis respondents are less willing to pay additional charges to address water-related concerns. At all potential payment levels tested in the survey, San Luis residents are significantly less willing to pay additional charges than statewide respondents.

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**Figure VI-12.**

**Willingness to pay more to address water-related issues**

**Note:**
Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level.

**Source:**
**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure VI-13, San Luis respondents overwhelmingly indicated that the amount of water for Colorado’s farms and ranches was the most important potential water-related issue that needs to be addressed (55%), more than double the statewide proportion of respondents that identified this issue as the most important (21%). Compared to statewide respondents, San Luis respondents were correspondingly less likely to indicate the following as the most important water-related issues:

- The quality of water you receive in your home (12% versus 24% statewide);
- Amount of water available for Colorado’s cities and towns (7% versus 18% statewide);
- Condition of underground water pipes, dams and other utility infrastructure (5% versus 10% statewide);
- Effects of energy development on water quality (4% versus 7% statewide); and
- Amount of water available for fish and wildlife (2% versus 5% statewide).

Each of the differences noted above was statistically significant.
Figure VI-13.
Most important water-related issue

Note:
Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:
Addressing the most important water-related issues. Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure VI-14 presents those results.

Overall, San Luis respondents most frequently indicated that their most important potential water-related issue should be addressed through conservation (22%). San Luis respondents also frequently indicated that their most important concerns should be addressed by:

- Prioritizing environmental needs (12%); or
- Education (7%).

San Luis residents were significantly more likely to recommend increasing water availability to farms and ranches as a solution (6%) than statewide respondents (2%).

Compared to statewide respondents, San Luis participants were significantly less likely to indicate the following approaches to address our water-related needs:

- Develop new projects/build more dams/reservoirs (7% versus 14%);
- Limit growth (4% versus 6%);
- Keep water clean and sanitary (2% versus 5%);
- Monitor/test water for quality/safety (2% versus 6%); or
- Fix/rebuild pipelines/infrastructure (1% versus 4%).
Figure VI-14.
What should be done to address the most important water concerns?

Note:
Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
Trusted Sources of Information

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-six percent of San Luis respondents indicated that they did. That result was similar to statewide participants (95%).

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure VI-15 presents those results.

San Luis Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (48%). The next most trusted sources for information identified by San Luis participants were environmental or conservation organizations (13%). While Colorado’s state government was the third most trusted source for information among San Luis residents, the proportion choosing that source (10%) was significantly lower than the statewide average (15%).

San Luis residents were also significantly less likely than statewide respondents to identify their local water utility (8 percent versus 12%) or Colorado’s educational institutions (4% versus 9%) as their most trusted source.

Figure VI-15. Most trusted sources of information

Note: Asterisks (*) denote a statistically significant difference between San Luis and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

SECTION VII.
Survey Results from Southwest Region

This section provides detailed information about Southwest region survey responses. Telephone surveys were completed with 325 participants who reside in the Southwest region of Colorado. The survey collected responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team compared Southwest regional responses to statewide responses, as appropriate, for each survey question.

Southwest Region

The Southwest region is comprised of the Gunnison Basin and the Dolores, San Juan, and San Miguel Basins — all located in southwestern Colorado. The Southwest region had approximately 207,000 residents in 2011. Montrose and Durango are the largest cities in the region. 171 of the 325 survey responses from this region were from residents living in the Gunnison Basin, the other 154 responses were from residents living in the Dolores, San Juan or San Miguel Basins.

Figure VII-1 presents a map of the Southwest region, as defined in this report.

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1 The Southwest region of Colorado is defined to include the Gunnison Basin and the Dolores, San Juan and San Miguel Basins.

2 Statewide survey responses are reported in a separate report.
Knowledge of Colorado Water Use and Issues

The survey asked a series of questions to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

**Sector that uses the most water.** When asked which sector uses the most water in Colorado, Southwest respondents most frequently (and correctly) identified farms and ranches (49%), as shown in Figure VII-2. This was significantly higher than the statewide average proportion giving this response (35%). Compared to statewide respondents (32%), fewer Southwest respondents (28%) identified households as the sector that uses the most water, but that difference was not significant. Southwest respondents were significantly less likely to choose industrial and commercial businesses (19%) as the sector that uses the most water in Colorado than statewide respondents (30%).
Figure VII-2.
Which sector uses the most water in Colorado?

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


Attention to water issues and water use. As shown in Figure VII-3, most survey respondents from the Southwest region (74%) indicated that they pay more attention to water issues today than in the past. While this proportion is similar to the statewide results (72%), a significantly smaller proportion of Southwest respondents said they pay less attention to water issues now than in the past (1 percent versus 5 percent statewide).

Seventy-one percent of the region’s respondents indicated they pay more attention to their own water use than they have in the past.

Figure VII-3.
Do you pay more or less attention to water issues today?

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Reasons for paying more attention to water issues. Of those Southwest respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure VII-4 shows the reasons why people are paying more attention to water issues. The most common reasons indicated by Southwest participants are:

- Recent drought or dry year (28%);
- Personal demographic reasons (e.g., older/more aware, have children, moved here from another state) (26%); and
- Career-livelihood situation (16%).

The proportion of regional respondents indicating their career-livelihood situation was the reason for paying more attention to water issues (16%) was significantly larger than the proportion of statewide respondents citing that reason (7%). Compared to statewide respondents, a significantly smaller share of Southwest participants cited water quality issues as their reason for paying more attention (8% versus 13%).

Figure VII-4.
Reasons why Coloradans pay more attention to water issues than in the past

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
Perceptions of Household Water Service

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each service is: inexpensive, priced about right, or too expensive. Overall, Southwest respondents consider household water service to be a relatively good value.

Figure VII-5 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV, and telephone/cell phone services.

- Eighty-four percent of respondents indicated that water was “inexpensive” or “priced about right,” compared to 16 percent who indicated that water was “too expensive;”
- Fifty-five percent of respondents indicated that energy was “inexpensive” or “priced about right,” compared to 45 percent who indicated that energy was “too expensive;”
- Thirty-seven percent of respondents indicated that telephone/cell phone service was “inexpensive” or “priced about right,” compared to 63 percent who indicated that telephone/cell phone service was “too expensive;” and
- Thirty-one percent of respondents indicated that cable or satellite TV was “inexpensive” or “priced about right,” compared to 69 percent who indicated that cable or satellite TV was “too expensive.”

Compared to statewide survey participants (12%), a larger share of Southwest participants (20%) indicated that water was “inexpensive.” A smaller share of participants from the Southwest region (17%) considered water to be “too expensive” than among statewide participants (28%). Both of these differences were statistically significant.
Performance of Government Agencies

Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figures VII-6 and VII-7 presents those results, respectively.

Overall, 42 percent of Southwest respondents agreed or strongly agreed with the statement that “government agencies are doing enough to protect the quality of your drinking water,” though there was not strong support for the statement. The average level of agreement was 5.9 (out of 10), and 24 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Thirty-four percent of respondents provided an essentially neutral response (rating their level of agreement as 5 or 6 out of 10). Those results were similar to statewide participants.
Southwest response to the statement “government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes” was similar with a level of agreement of 6.0 out of 10. Forty-nine percent of respondents agreed or strongly agreed with that statement, and 25 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Twenty-five percent of respondents provided a neutral response. In general, these results were similar to statewide participants, though respondents from the Southwest region less often indicated a neutral response.

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:

- Colorado has enough water available to meet our current needs; and
- Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

Current water needs. Figure VII-8 shows that, overall, Southwest respondents indicated mild disagreement that Colorado has enough water to meet its current needs. On average, agreement was 4.7 out of 10, and 50 percent of respondents either disagreed or strongly disagreed with that statement. Thirty-two percent of respondents agreed or strongly agreed with the statement, while 18 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

On average, Southwest respondents were more likely to strongly disagree that Colorado has enough water to meet our current needs (29%) than statewide respondents (22%) and less likely to provide a neutral response (18% versus 25% of statewide survey respondents). These differences were statistically significant.

Water needs for the next 40 years. Figure VII-9 shows that, on average, Southwest Coloradans disagreed that “Colorado has enough water available to meet our needs for the next 40 years.” The average response to this statement in the Southwest region was 3.4 out of 10, and 70 percent of respondents disagreed or strongly disagreed. Only 12 percent agreed or strongly agreed with the statement. Participants from the Southwest region were more likely to strongly disagree with this statement (47%) than statewide participants (40%).
Figure VII-9.
Colorado has enough water for the next 40 years.

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Looking forward. Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that “Colorado will have enough water available to meet all of its needs in the future.” Figure VII-10 presents those results.

On average, Southwest respondents rated their confidence that Colorado will have enough water to meet all of its future needs as 3.5 out of 10. That average rating is significantly lower than the average rating from statewide survey participants (4.0). Sixty-seven percent of Southwest respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs, including 40 percent who indicated very little confidence – a significantly higher percentage than the statewide average of 32 percent. Twelve percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs.

Figure VII-10.
Colorado will have enough water to meet our future needs.

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.
Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado’s cities and towns;
- Amount of water available for Colorado’s farms and ranches;
- Amount of water for recreational use such as boating, rafting, and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams, and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure VII-11 presents the reported level of concern for each issue. On average, the amount of water available for Colorado’s farms and ranches received the highest rating of concern (7.0 out of 10) from Southwest participants. Southwest respondents were least concerned with the amount of water available for recreational use such as boating, rafting, and fishing.

Southwest responses were generally similar to those for statewide participants except that Southwest survey participants indicated a significantly higher level of concern regarding the amount of water used for energy development (6.0) than statewide participants (5.7).
Figure VII-11.
Water-related issues.

<table>
<thead>
<tr>
<th></th>
<th>Not concerned</th>
<th>Little concern</th>
<th>Moderate concern</th>
<th>Quite concerned</th>
<th>Very concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of water available for Colorado’s farms and ranches</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southwest (n=324)</td>
<td>7.4%</td>
<td>9.3%</td>
<td>18.8%*</td>
<td>31.8%</td>
<td>33.7%</td>
</tr>
<tr>
<td>Statewide (n=1938)</td>
<td>4.9%</td>
<td>10.6%</td>
<td>23.5%</td>
<td>37.4%</td>
<td>29.0%</td>
</tr>
<tr>
<td>Mean</td>
<td>7.0</td>
<td>7.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Water quality in our rivers, lakes, and streams | | | | | |
| Southwest (n=324) | 10.8% | 9.6% | 18.2%* | 33.0% | 28.4% |
| Statewide (n=1938) | 7.8% | 9.6% | 24.5% | 34.3% | 23.9% |
| Mean | 6.7 | 6.6 | | | |

| Amount of water available for Colorado’s cities and towns | | | | | |
| Southwest (n=317) | 9.5% | 10.4% | 26.2% | 33.1% | 20.8% |
| Statewide (n=1926) | 5.9% | 10.7% | 23.5% | 33.5% | 24.4% |
| Mean | 6.4 | 6.7 | | | |

| Condition of underground water pipes, dams, and other water utility infrastructure | | | | | |
| Southwest (n=311) | 10.2% | 9.3% | 31.6% | 24.6% | 24.3% |
| Statewide (n=1980) | 6.9% | 12.7% | 28.0% | 12.0% | 20.2% |
| Mean | 6.4 | 6.4 | | | |

| The quality of the water you receive at your home | | | | | |
| Southwest (n=315) | 20.0% | 13.2% | 12.9% | 10.2% | 35.7% |
| Statewide (n=1941) | 17.5% | 11.1% | 13.8% | 22.2% | 35.5% |
| Mean | 6.3 | 6.5 | | | |

| Effects of energy development on water quality | | | | | |
| Southwest (n=315) | 12.4% | 13.0% | 24.8% | 23.5%* | 26.3%* |
| Statewide (n=1981) | 10.4% | 11.4% | 28.9% | 28.0% | 20.5% |
| Mean | 6.3 | 6.2 | | | |

| Amount of water for fish and wildlife | | | | | |
| Southwest (n=325) | 12.9%* | 13.5% | 23.4%* | 28.0% | 22.2% |
| Statewide (n=1937) | 8.7% | 11.2% | 28.7% | 20.4% | 22.0% |
| Mean | 6.2 | 6.4 | | | |

| Amount of water used for energy development | | | | | |
| Southwest (n=305) | 10.8% | 12.1% | 34.8% | 22.3% | 20.0%* |
| Statewide (n=1833) | 11.6% | 12.1% | 37.6% | 21.7% | 14.9% |
| Mean | 6.0* | 5.7 | | | |

| Amount of water for recreational use such as boating, rafting, and fishing | | | | | |
| Southwest (n=324) | 18.8% | 15.7% | 27.5%* | 22.8% | 15.1% |
| Statewide (n=1932) | 16.9% | 17.6% | 34.4% | 20.6% | 10.5% |
| Mean | 5.4 | 5.2 | | | |

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level.
Willingness to pay. The survey asked participants whether they would be willing to pay an additional $1, $5, $10, or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure VII-12 presents those results for Southwest and statewide survey respondents. Survey results indicate that most Southwest Coloradans would be willing to pay a small additional charge to address water-related concerns.

- Fifty-nine percent of respondents indicated that they would be willing to pay an additional $1 per month;
- Forty-five percent of respondents indicated that they would be willing to pay an additional $5 per month;
- Thirty-nine percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- Thirty-five percent indicated that they would be willing to pay an additional $25 per month.

On average, Southwest households would be willing to pay between $1 and $5 per month to address a variety of potential concerns identified in the survey.

Figure VII-12 also shows that, compared to statewide respondents, Southwest respondents are generally less willing pay an additional charge to address water-related concerns. The proportions of Southwest survey respondents willing to pay $1, $5, or $10 per month were between 7 and 9 percent lower than average statewide, and those differences were statistically significant.
**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure VII-13, Southwest respondents most frequently indicated that the amount of water available for Colorado’s farms and ranches was the most important potential water-related issue that needs to be addressed (32%). This proportion was significantly greater than the proportion of statewide participants providing this response (21%). The second and third most frequently identified most important issues by Southwest Coloradans were:

- The amount of water available for Colorado’s cities and towns (18%); and
- The quality of water you receive at your home (15%).

Although home water quality was the third most frequently identified most important issue among residents of the Southwest region, the proportion identifying that issue as most important (18%) was significantly lower than the statewide average (24%). Southwest respondents also identified the condition of underground water infrastructure as the most important issue (6%) less frequently than statewide respondents (10%). Other responses to this question from Southwest survey participants were not significantly different from statewide responses.
Figure VII-13.
Most important water-related issue

Note:
Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:
**Addressing the most important water-related issues.** Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure VII-14 presents those results.

Overall, Southwest respondents most frequently indicated that their most important potential water-related issue should be addressed through conservation (23%). Southwest respondents also frequently indicated that their most important concerns should be addressed by:

- Prioritizing environmental needs (19%); or
- Developing new projects/building more dams or reservoirs (10%).

Overall, Southwest responses were similar to those for statewide participants. The only statistically significant differences were in the lower proportions of Southwest respondents identifying limiting growth, fixing pipelines and infrastructure, or raising the price of water as their suggested approaches for addressing water-related issues.
Figure VII-14.
What should be done to address the most important water concerns?

Note:
Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:
**Trusted Sources of Information**

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-five percent of Southwest respondents indicated that they did, the same proportion as found among statewide participants.

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure VII-15 presents those results.

Southwest Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (41%). The next most trusted sources for information identified by Southwest participants were environmental or conservation organizations (17%) and local water utilities (12%).

Compared to statewide participants (29%), Southwest participants were significantly more likely to choose Colorado’s water conservancy and water conservation districts as their most source (41%), and were less likely to indicate that they most trusted Colorado’s state government (7% versus 15%) or Colorado’s educational institutions (5% versus 9%).

**Figure VII-15. Most trusted sources of information**

Note: Asterisks (*) denote a statistically significant difference between Southwest and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

SECTIOIN VIII.
Survey Results from West Northwest Region

This section provides detailed information about West Northwest (NW) survey responses. Telephone surveys were completed with 325 participants who reside in the West NW region of Colorado. The survey collected responses on key topics, including:

- Knowledge of Colorado water use and awareness of water issues;
- Perceptions regarding household water service;
- Performance of government agencies;
- Scarcity perceptions;
- Water-related concerns;
- Need for more information and most trusted sources; and
- Demographics.

The study team compared West NW regional responses to statewide responses, as appropriate, for each survey question.

West NW Region

The West NW region includes the Colorado River Basin and the Yampa, White and Green River Basins, located in northwestern Colorado. Of the 325 survey responses from this region, 253 were from residents living in the Colorado River Basin and 72 were from residents living in the Yampa, White or Green River Basins.

The region had approximately 330,000 residents in 2011. Grand Junction is the largest city in the region and the largest city in Colorado that is not located in the Front Range. Figure VIII-1 presents a map of the West NW region, as defined in this report.
Knowledge of Colorado Water Use and Issues

The survey asked a series of questions to gauge respondents’ knowledge of Colorado water use and water-related issues. Respondents were asked to identify which Colorado sector uses the most water. Respondents were also asked whether they pay more or less attention to their own water use today than they have in the past, and why.

Sector that uses the most water. When asked which sector uses the most water in Colorado, West NW respondents most frequently (and correctly) identified farms and ranches (40%), as shown in Figure VIII-2. Compared to statewide respondents (30%), fewer West NW respondents (23%) identified industrial and commercial businesses as the sector that uses the most water. About 32 percent of West NW respondents indicated that households used the most water, the same proportion as among statewide respondents.
Figure VIII-2.
Which sector uses the most water in Colorado?

Note: Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Attention to water issues and water use. As shown in Figure VIII-3, most survey respondents (75%) indicated that they pay more attention to water issues today than in the past. About four percent said they paid less attention water issues today. Those results were similar to statewide respondents, as shown in Figure VIII-3. A similar majority of respondents (73%) indicated they pay more attention to their own water use than they have in the past.

Figure VIII-3.
Do you pay more or less attention to water issues today?

Note:
Totals may not equal 100% due to rounding.
Source:
**Reasons for paying more attention to water issues.** Of those West NW respondents who indicated that they pay more attention to water issues today than in the past, the survey asked them to identify why they now pay more attention. Figure VIII-4 shows the reasons why people are paying more attention to water issues. The most common reasons indicated by West NW participants are:

- Recent drought or dry year (26%);
- Personal demographic reasons (e.g., older/more aware, have children, moved here from another state) (24%); and
- Water quality issues (e.g., perceived lower quality of water, increase in water pollution/contamination, safety/health concerns) (15%).

The results were similar to statewide responses, with no statistically significant differences.

**Figure VIII-4. Reasons why Coloradans pay more attention to water issues than in the past**

Note: Totals do not equal 100%, because respondents could choose more than one option.

Perceptions of Household Water Service

The survey listed a series of services that Coloradans may be paying for at home and asked respondents to identify whether each service is: inexpensive, priced about right, or too expensive. Overall, West NW respondents consider household water service to be a relatively good value.

Figure VIII-5 indicates that household water service is considered a better value than other household services, including energy, cable or satellite TV, and telephone/cell phone services.

- Seventy-nine percent of respondents indicated that water was “inexpensive” or “priced about right,” compared to 21 percent who indicated that water was “too expensive;”
- Fifty percent of respondents indicated that energy was “inexpensive” or “priced about right,” while the other 50 percent indicated that energy was “too expensive;”
- Thirty-five percent of respondents indicated that telephone/cell phone service was “inexpensive” or “priced about right,” compared to 65 percent who indicated that telephone/cell phone service was “too expensive;” and
- Twenty-one percent of respondents indicated that cable or satellite TV was “inexpensive” or “priced about right,” compared to 79 percent who indicated that cable or satellite TV was “too expensive.”

Compared to statewide survey participants (28%), a smaller share of West NW participants (21%) indicated that water was “too expensive,” and that difference was statistically significant.
Performance of Government Agencies

Respondents were asked two questions regarding current regulation and management of water in Colorado. Using a scale of a 1 to 10, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level of agreement with the following statements:

- Government agencies are doing enough to protect the quality of your drinking water; and
- Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

Figures VIII-6 and VIII-7 present those results, respectively.

Overall, 48 percent of West NW respondents agreed or strongly agreed with the statement that “government agencies are doing enough to protect the quality of your drinking water,” though there was not strong support for the statement. The average level of agreement was 6.0 (out of 10), and 28 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Twenty-four percent of respondents provided an essentially neutral response (rating
their level of agreement as 5 or 6 out of 10), a significantly smaller percentage than the proportion of statewide respondents providing a neutral response (30%).

**Figure VIII-6.**

**Government agencies are doing enough to protect the quality of your drinking water.**

![Figure VIII-6](image)

Note: Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


West NW response to the statement "government agencies are doing enough to protect quality of water in Colorado’s streams, rivers and lakes" was similar with a level of agreement of 5.8 out of 10. Forty-three percent of respondents agreed or strongly agreed with that statement, while 29 percent of respondents indicated that they disagreed or strongly disagreed with that statement. Twenty-eight percent of respondents provided a neutral response. None of these results were significantly different from the responses of statewide participants.

**Figure VIII-7.**

**Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.**

![Figure VIII-7](image)

Note: Totals may not equal 100% due to rounding.

Scarcity Perceptions

The survey asked a series of questions about perceptions of water scarcity in Colorado. Using a 1 to 10 scale, where 1 means “completely disagree” and 10 means “completely agree,” respondents were asked to rate their level agreement with the following statements:

- Colorado has enough water available to meet our current needs; and
- Colorado has enough water available to meet our needs for the next 40 years.

After being provided with information about projected future population growth in Colorado, later in the survey, respondents were also asked to rate how confident they are that “Colorado will have enough water to meet all of its needs in the future?” That question also used the 1 to 10 scale. In this context, 1 means “not confident at all” and 10 means “very confident.”

Current water needs. Figure VIII-8 shows that, overall, West NW respondents indicated mild disagreement that Colorado has enough water to meet its current needs. On average, agreement was 4.8 out of 10, and 46 percent of respondents either disagreed or strongly disagreed with that statement. Twenty-nine percent of respondents agreed or strongly agreed with the statement, while 25 percent provided a neutral response (a rating of 5 or 6 on the 10 point scale).

These results are similar to the statewide responses to this question, though West NW residents were more likely to indicate they strongly disagreed with the statement (providing a rating of 1 or 2 out of 10) and less likely to indicate milder disagreement (a rating of 3 or 4 out of 10).
Figure VIII-8.
Colorado has enough water to meet our current needs.

Note: Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.


Water needs for the next 40 years. Figure VIII-9 shows that, on average, West NW Coloradans disagreed that "Colorado has enough water available to meet our needs for the next 40 years." The average response to this statement in the West NW region was 3.4 out of 10, and 70 percent of respondents disagreed or strongly disagreed. Only 11 percent agreed or strongly agreed with the statement. Those results were similar to statewide participants.
Figure VIII-9.
Colorado has enough water for the next 40 years.

![Chart showing water availability percentages for West NW (n=309) and Statewide (n=1853) respondents.]

Note: Totals may not equal 100% due to rounding.

Looking forward. Towards the end of the survey, participants were provided information about projected future population growth in Colorado. They were then asked to indicate how confident they were that "Colorado will have enough water available to meet all of its needs in the future."

Figure VIII-10 presents those results. On average, West NW respondents rated their confidence that Colorado will have enough water to meet all of its future needs at 3.9 out of 10. Sixty-two percent of West NW respondents indicated they had little or very little confidence that Colorado will have enough water to meet its future needs. Seventeen percent had some confidence or strong confidence that Colorado will have enough water to meet all of its future needs, while 23 percent of West NW respondents provided a neutral response (rating their confidence as 5 or 6 out of 10). Paradoxically, West NW residents were significantly more likely than statewide respondents to indicate they were either not confident at all that we will have enough water to meet our future needs (1 or 2), or to indicate they were very confident we will have enough water (9 or 10).

Figure VIII-10.
Colorado will have enough water to meet our future needs.

![Chart showing confidence levels for West NW (n=3118) and Statewide (n=1925) respondents.]

Note: Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.
Water-Related Concerns

The survey asked a series of questions to gauge Coloradans’ perceptions of water-related concerns. Using a scale of a 1 to 10 scale, where 1 means “not concerned at all” and 10 means “very concerned,” respondents were asked to rate their level of concern with the following potential water-related issues:

- Water quality in our rivers, lakes and streams;
- Amount of water available for Colorado's cities and towns;
- Amount of water available for Colorado's farms and ranches;
- Amount of water for recreational use such as boating, rafting, and fishing;
- Amount of water for fish and wildlife;
- Condition of underground water pipes, dams, and other water utility infrastructure;
- The quality of the water you receive at your home;
- Amount of water used for energy development; and
- Effects of energy development on water quality.

Figure VIII-11 presents the reported level of concern for each issue. On average, the amount of water available for Colorado's farms and ranches received the highest rating of concern (7.2 out of 10) from West NW participants. West NW respondents indicated the least concern with the amount of water available for recreational use such as boating, rafting, and fishing (5.7 out of 10), though their level of concern with that issue was significantly greater than average among statewide survey participants (5.2 out of 10). The average level of concern about the amount of water for fish & wildlife among West NW participants (6.8 out of 10) was also significantly higher than average among statewide participants (6.4 out of 10).
Figure VIII-11.
Water-related issues.

Note: Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level.
**Willingness to pay.** The survey asked participants whether they would be willing to pay an additional $1, $5, $10, or $25 per month to address potential water-related issues. Each participant was presented with only one dollar amount, and the amount presented to the participants was varied on a random basis.

Figure VIII-12 presents those results for West NW and statewide survey respondents. Survey results indicate that most West NW Coloradans would be willing to pay an additional charge to address water-related concerns.

- Sixty-nine percent of respondents indicated that they would be willing to pay an additional $1 per month;
- Fifty-three percent of respondents indicated that they would be willing to pay an additional $5 per month;
- Forty-three percent of respondents indicated that they would be willing to pay an additional $10 per month; and
- Thirty-three percent indicated that they would be willing to pay an additional $25 per month.

On average, West NW households would be willing to pay between $5 and $10 per month to address a variety of potential concerns identified in the survey.

Figure VIII-12 also shows that the willingness of West NW survey respondents to pay an additional charge to address water-related concerns is similar to that of statewide respondents. There were no statistically significant differences between the regional results and the statewide results in terms of willingness to pay to address potential water-related concerns.

**Figure VIII-12.**
*Willingness to pay more to address water-related issues*

Source:
**Most important water-related issue.** Survey participants were also asked to identify which potential water-related issue is the most important issue that needs to be addressed.

As shown in Figure VIII-13, West NW respondents most frequently indicated that the quality of water they receive in their homes was the most important potential water-related issue that needs to be addressed (24%). The second and third most frequently identified most important issues among West NW Coloradans were:

- Amount of water available for Colorado’s farms and ranches (20%); and
- Amount of water available for Colorado’s cities and towns (12%).

Compared to statewide respondents (18%), West NW respondents were less likely to be concerned with the amount of water for cities and towns (12%), and that difference was statistically significant. West NW respondents (15%) were more likely to be concerned with the condition of underground water infrastructure than statewide respondents (10%), and that difference was statistically significant.

**Figure VIII-13.**
**Most important water-related issue**

Note: Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

**Addressing the most important water-related issues.** Survey participants were asked what they thought should be done to address their most important concerns. That question was open-ended (unprompted), but responses (including a few multiple responses) were coded by the surveyors. Figure VIII-14 presents those results.

Overall, West NW respondents most frequently indicated that their most important potential water-related issue should be addressed through conservation (21%). West NW respondents also frequently indicated that their most important concerns should be addressed by:

- Developing new projects/building more dams or reservoirs (16%); or
- Prioritizing environmental needs (15%).

Overall, West NW responses were similar to those for statewide participants. The only statistically significant difference between regional responses and the statewide averages was less frequent suggestion by West NW respondents that water-related issues should be addressed by raising the price of water (1%) than among statewide participants (3%).
**Figure VIII-14.**

What should be done to address the most important water concerns?

Note:
Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals do not equal 100%, because respondents could choose more than one option.

Source:

<table>
<thead>
<tr>
<th>Concern</th>
<th>West NW (n=261)</th>
<th>Statewide (n=1552)</th>
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<td>Conservation</td>
<td>21.1%</td>
<td>19.4%</td>
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<tr>
<td>Develop new projects/ Build more dams/reservoirs</td>
<td>15.7%</td>
<td>13.7%</td>
</tr>
<tr>
<td>Prioritize environmental needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor/test water for quality/safety</td>
<td>7.3%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limit water leaving the state/keep water in CO</td>
<td>5.0%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Keep water clean/sanitary</td>
<td>4.2%</td>
<td>5.0%</td>
</tr>
<tr>
<td>More government regulation of water usage</td>
<td>3.8%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Limit Growth</td>
<td>3.8%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Fix/rebuild pipelines/ infrastructure</td>
<td>2.7%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Limit/ regulate fracking/ energy development</td>
<td>2.3%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Increase water availability for farms and ranches</td>
<td>1.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Reuse</td>
<td>1.5%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Conduct research/studies</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Less government regulation</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Protect water rights</td>
<td>1.1%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Raise the price of water</td>
<td>1.1%*</td>
<td>2.6%</td>
</tr>
<tr>
<td>Need more rain/snow</td>
<td>0.8%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
Trusted Sources of Information

The survey asked participants whether they thought Colorado residents need to know more about the state’s water situation and potential future water issues or concerns. Ninety-three percent of West NW respondents indicated that they did. That result was similar to statewide participants (95%).

As a follow-up, the survey asked respondents to identify which organizations they would most trust to provide reliable information about Colorado’s water situation and potential issues. Figure VIII-15 presents those results.

West NW Coloradans most frequently identified Colorado’s regional water conservancy and water conservation districts as the organizations they would most trust to provide information about water-related issues (34%). The next most trusted sources for information identified by West NW participants were environmental or conservation organizations (17%). Local water utilities (10%) were the third most trusted source for water-related information.

Compared to statewide participants, West NW participants were less likely to indicate that their most trusted source for water-related information was Colorado’s state government (10% versus 15% statewide). That difference was statistically significant.

Figure VIII-15.
Most trusted sources of information

Note:
Asterisks (*) denote a statistically significant difference between West NW and statewide respondents at the 95% confidence level. Totals may not equal 100% due to rounding.

Source:
SECTION IX.
References

In the narrative concerning the statewide survey results in Section II of this report, BBC described results from other surveys that have posed questions similar or related to some of the areas of inquiry examined in this study. The following is a list of the other survey analyses cited in Section II.

References


Colorado State University, Department of Soil and Crop Sciences. Undated. “Survey of Public Attitudes About Water Issues in Colorado.”


Attachment A: Telephone Survey Instrument
CWCB SURVEY INSTRUMENT, 11/2/12

Introduction

Hello, this is __________ calling from Davis Research on behalf of the State of Colorado. We are conducting a short survey with Colorado residents about water in Colorado. This is not a sales call – the State of Colorado would sincerely appreciate your participation.

As you answer the questions, please think beyond the current dry year we are experiencing in Colorado and give responses based on your perception of water in general. Your individual responses to these questions will be kept confidential.

I will begin with a few introductory questions.

1. To ensure we have a representative mix of the state of Colorado, may I have your age?
   __________ TERMINATE IF YOUNGER THAN 18
   
   88 = I don’t know.  ➔ TERMINATE
   99 = I prefer not to respond.  ➔ GO TO 1a.

1a. ASK ONLY IF REFUSED TO ANSWER QUESTION 1: Which of the following categories best describes your age?

   1 = 18 to 24
   2 = 25 to 34
   3 = 35 to 44
   4 = 45 to 54
   5 = 55 to 64
   6 = 65 or older

2. In which zip code is your primary residence located? ______ TERMINATE IF NOT COLORADO

   88 = I don’t know.  ➔ TERMINATE
   99 = I prefer not to respond.  ➔ TERMINATE
3. Thinking of the following water users, which do you think uses the most water in Colorado?:

PLEASE SELECT ONE; READ CHOICES; RANDOMIZE CHOICES

1 = Industrial and commercial businesses
2 = Households
3 = Farms and ranches
DO NOT READ
55 = Other (please specify): ______________________________
77 = None of these
88 = I don’t know
99 = Refused

4. Does your household pay a monthly or bimonthly water bill based on how much water you use, or is it included in your rent or HOA payment?

1 = PAYS A WATER BILL → go to QUESTION 5
2 = INCLUDED IN RENT OR HOA → go to QUESTION 6
77 = Not applicable or uses a well → go to QUESTION 6
88 = I don’t know → go to QUESTION 6
99 = Refused → go to QUESTION 6

5. I am going to read you a list of services that you may be paying for at your home. Please tell me whether you consider each one to be inexpensive, priced about right, or too expensive:

RANDOMIZE ORDER OF QUESTIONS 5a – 5d

a. Energy (electricity and heat)
   1 = inexpensive
   2 = priced about right
   3 = too expensive
   77 = I don’t pay for that
   88 = I don’t know
   99 = Refused

b. Water
   1 = inexpensive
   2 = priced about right
   3 = too expensive
   77 = I don’t pay for that
   88 = I don’t know
   99 = Refused
c. Cable or Satellite TV

1 = inexpensive
2 = priced about right
3 = too expensive
77 = I don't pay for that
88 = I don't know
99 = Refused

d. Telephone, including cell phone

1 = inexpensive
2 = priced about right
3 = too expensive
77 = I don't pay for that
88 = I don't know
99 = Refused

On a scale from 1 to 10, please tell me your level of agreement with the following statements, where 1 means “completely disagree” and 10 means “completely agree.” Again, you should feel free to use any number from 1 to 10:

6. Government agencies are doing enough to protect the quality of your drinking water.

ENTER 1-10

88 = I don’t know
99 = Refused

7. Government agencies are doing enough to protect the quality of water in Colorado streams, rivers, and lakes.

ENTER 1-10

88 = I don’t know
99 = Refused

8. Colorado has enough water available to meet our current needs.

ENTER 1-10

88 = I don’t know
99 = Refused
9. Colorado has enough water available to meet our needs for the next 40 years?

ENTER 1-10

88 = I don’t know
99 = Refused

10. Now I’m going to read you a list of possible current or future issues regarding water in Colorado. After I read each one, please rate your level of concern about that issue on a scale of 1 to 10, where 1 means “you are not concerned at all” and 10 means “you are very concerned.” Again, please use any number on the scale that best reflects how concerned you are about the specific issue.

RANDOMIZE ORDER OF QUESTIONS 10a – 10h

a. Water quality in our rivers, lakes and streams

ENTER 1-10

88 = I don’t know
99 = Refused

b. Amount of water available for Colorado’s cities and towns

ENTER 1-10

88 = I don’t know
99 = Refused

c. Amount of water available for Colorado’s farms and ranches

ENTER 1-10

88 = I don’t know
99 = Refused

d. Amount of water for recreational use such as boating, rafting and fishing

ENTER 1-10

88 = I don’t know
99 = Refused
e. Amount of water for fish and wildlife

ENTER 1-10

88 = I don’t know
99 = Refused

f. Condition of underground water pipes, dams and other water utility infrastructure

ENTER 1-10

88 = I don’t know
99 = Refused

g. The quality of the water you receive at your home

ENTER 1-10

88 = I don’t know
99 = Refused

h. Amount of water used for energy development

ENTER 1-10

88 = I don’t know
99 = Refused

i. Effects of energy development on water quality

ENTER 1-10

88 = I don’t know
99 = Refused

FOR QUESTION 11, RANDOMIZE $1, $5, $10, $25 AS DOLLAR AMOUNT TO PAY – PLEASE RECORD WHAT DOLLAR AMOUNT WAS ASKED OF EACH RESPONDENT

11. Would you be willing to pay an additional $____ [RANDOMIZE $1, $5, $10, $25] per month in your water bill, rent or HOA payment to address the potential issues we just discussed?

1 = YES
2 = NO
88 = I don’t know
99 = Refused
12. I'm going to reread the list of potential issues that we just discussed. Please tell me which is the MOST IMPORTANT issue that needs to be addressed:

PLEASE SELECT ONE; READ CHOICES; RANDOMIZE ORDER OF CHOICES TO REFLECT RANDOMIZED ORDER OF QUESTIONS 10a – 10i

1 = Water quality in our rivers, lakes and streams  
2 = Amount of water available for Colorado's cities and towns  
3 = Amount of water available for Colorado's farms and ranches  
4 = Amount of water for recreational use such as boating, rafting and fishing  
5 = Amount of water for fish and wildlife  
6 = Condition of underground water pipes, dams and other water utility infrastructure  
7 = The quality of water you receive in your home  
8 = Amount of water used for energy development  
9 = Effects of energy development on water quality  
DO NOT READ  
55 = Other (please specify): ________________________________  
66 = All of these  
77 = None of these → go to QUESTION 14  
88 = I don’t know → go to QUESTION 14  
99 = Refused → go to QUESTION 14

13. What should be done to address your MOST IMPORTANT issue?

OPEN-ENDED – CODE THIS TO CLOSE IT

88 = I don’t know  
99 = Refused

14. How many years have you lived in Colorado?

ENTER YEARS LIVED IN COLORADO; LESS THAN 1 YEAR = 0 AND PARTIAL YEARS ROUND DOWN

88 = I don’t know  
99 = Refused

15. Do you pay more or less attention to water issues today than you have in the past?

1 = MORE  
2 = LESS  
3 = SAME → go to QUESTION 17  
88 = I don’t know → go to QUESTION 17  
99 = Refused → go to QUESTION 17
16. Why?  

OPEN-ENDED

17. Do you pay more or less attention to your own water use today than you have in the past?

1 = MORE  
2 = LESS  
3 = SAME  
88 = I don’t know  
99 = Refused

18. Do you think that Colorado residents need to know more about the state’s water situation and potential future water issues or concerns?

1 = YES  
2 = NO → go to QUESTION 20  
88 = I don’t know → go to QUESTION 20  
99 = Refused → go to QUESTION 20

19. Among the following types of organizations, who would you most trust to provide reliable information about Colorado’s water situation and water issues?

RANDOMIZE – READ RESPONSES 1 THROUGH 7

1 = Your local water utility  
2 = Your city or county government  
3 = Colorado’s water conservancy and water conservation districts*  
4 = Environmental or conservation organizations  
5 = Colorado’s state government  
6 = Federal government  
7 = Colorado’s educational institutions  
55 = Other (please specify): ________________________________  
77 = None of these (nobody)  
88 = I don’t know  
99 = Refused

*NOTE TO SURVEYORS: IF RESPONDENT ASKS FOR CLARIFICATION ABOUT THESE DISTRICTS → RESPOND “FOR EXAMPLE, THE COLORADO RIVER WATER CONSERVATION DISTRICT OR THE NORTHERN COLORADO WATER CONSERVANCY DISTRICT”
20. Colorado’s population is projected to grow by more than 4 million people over the next 40 years, nearly doubling the current population by 2050. On a scale from 1 to 10, where 1 means “not confident at all” and 10 means “completely confident,” how confident are you that Colorado will have enough water to meet all of its needs in the future?

ENTER 1-10

88 = I don’t know
99 = Refused

SPANISH SPEAKING RESPONDENTS ➔ go to QUESTION 22

21. Would you be interested in participating in a State of Colorado sponsored focus group meeting in your area to further discuss water issues in Colorado? The State would provide a small amount to reimburse travel expenses and a snack.

1 = YES – go to 21a
2 = NO – go to 22
88 = I don’t know – go to 22
99 = Refused – go to 22

21a. RECORD NAME, TELEPHONE NUMBER, EMAIL ADDRESS

We are almost done. I just have a few questions left to ask for demographic purposes.

22. What is your race or ethnicity?

ACCEPT MULTIPLE RESPONSES; DO NOT READ CHOICES

1 = White
2 = Hispanic
3 = Black, African American, or Negro
4 = American Indian or Alaska Native
5 = Asian Pacific
6 = Subcontinent Asian
7 = Mixed race
55 = Other race (please specify): ___________________________
88 = I don’t know
99 = Refused
23. Which of the following categories best represents your total household income for 2011?

1 = Less than $25,000
2 = $25,000 to $49,999
3 = $50,000 to $74,999
4 = $75,000 to $99,999
5 = $100,000 or more
88 = I don’t know
99 = Refused

24. Record Gender (do not ask)

1 = Male
2 = Female

Thank you very much for participating in this survey!