

WE ALL PLAY A PART IN LIVING CENTRAL YAVAPAI COUNTY..



Central Yavapai Regional Partners
Water Conservation Opinion Survey

2007-2008

Summary Report & Conclusions

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INTRODUCTION

As part of its ongoing regional water conservation public education effort, a survey of western Yavapai County residents was conducted by the City of Prescott Water Conservation Office during the fall of 2007. It was designed to gauge opinions on and knowledge of water conservation, with an emphasis placed on outdoor water use.

The survey was distributed via direct mail through its inclusion in City of Prescott utility billing statements and a Town of Chino Valley newsletter, insertion in the Prescott Valley Tribune newspaper, and distribution at high profile events in western Yavapai County. A total of 2,925 completed surveys were received, 1,215 of which were from City of Prescott residents comprising 41 percent (%) of all respondents.

Current market conditions identified through the examination of survey results and identification of trends are allowing us to develop effective tools that will assist the City of Prescott and its partners in meeting water conservation and management goals. This report is a cumulative analysis of the City of Prescott and regional data with associated findings and conclusions.

Summary of Major Findings:

- ◆ A significant number of respondents directly associate the need for water conservation with area population growth, although they do understand this is an arid, drought-prone area and consider conservation vital to long-term sustainability of the water resource.
- ◆ When analyzing overall results, the majority of respondents report they understand and practice the principles of low water use landscaping; however, historic water use statistics for summer months do not support these claims. There is a disconnect between what is stated and actual practice.
- ◆ Respondents are not necessarily opposed to government regulation to promote water conservation. The type and intensity of regulation was not a topic for this survey. It will require additional research to determine what level of regulation is considered “acceptable.”
- ◆ Respondents do not have a clear understanding of rainwater harvesting. The majority do not want harvested rainwater to be the only permitted source for outdoor irrigation.
- ◆ Respondents want to learn more about water conservation practices. They consider this to be an important issue, so important that the majority support the use of tax dollars to finance public education and information dissemination.
- ◆ Confusion exists among respondents about the principles of Xeriscape and their relation to low water use landscaping. The majority do not understand how to develop annual budgets for indoor and outdoor use.

RESPONDENT CHARACTERISTICS AND PERCEPTIONS

- ◆ The majority of respondents receive water delivered through a municipal system (93%). They pay attention to their monthly water usage (91%). – *Related survey questions 2 and 4*

- ◆ They live in an area not governed by a homeowner’s association in a residence 1,800 to 3,000 square feet in size (47%) that includes water efficient appliances and/or fixtures. Their home is 10 to 30 years old (41%) and is located on an average city lot (55%). - *Related survey questions 5, 6, 7, 8*

- ◆ Over 80 percent do not have lawns, but do have plants, trees and shrubs (80%) that they regularly water during the morning (65%) or evening (32%). Over half of the residents with irrigation systems report they reset timers seasonally. *Related survey questions 9, 10, 13, 14*

- ◆ When selecting plants to install in their landscapes, respondents first consider water use (75%), followed by maintenance (69%), cost (32%) and fire safety (30%). - *Related survey question 17e*

- ◆ Seventy-six percent (76%) designed their yards to be low-water use with no grass area. They claim to understand the principles of outdoor water conservation (81%), but only 52 percent (52 %) stated they understand the seven steps to Xeriscape and the efficiency of drip irrigation. Thirty four percent (34%) regularly water their native vegetation. – *Related survey questions 18c, 18e, 18f, 18h*

- ◆ Respondents have a perception that the installation of automatic sprinkler systems will conserve water (68%). They consider the use of handheld hoses to be wasteful (45%) with 27 percent (27%) neutral. They are not convinced that 50 percent (50%) of household water use can be attributed to outdoor consumption. – *Related survey questions 19i, 19m, 19x*

- ◆ The majority of respondents are confused about rainwater harvesting. Forty one percent (41%) of respondents disagreed with the statement “If I harvest rainwater for outdoor watering, I can plant whatever I want.” Twenty-eight percent (28%) were neutral, and 22 percent (22%) agreed. Fifty eight percent of respondents (58%) do not want harvested rainwater to be the only water permitted for outdoor watering; 21 percent (21%) were neutral; and only 11 percent (11%) agreed that harvested rainwater should be the only source for outdoor use. – *Related survey questions 19l, 19y*

- ◆ Respondents overwhelmingly prefer to receive information about water conservation programs in a printed format. - *Related survey question 17a*

Dissemination Method	% of Respondents
Utility bill inserts	78
Newspaper	40
Direct Mail	40
E-mail	17.5
Website	11
Radio	8.8
Television	8.5
Public Event	5

♦ Respondents would rather receive education through newspaper articles (59.6%), at the place where they purchase their plants (41.8%), through other publications (29%), from a professional gardener (23.5%) and/or via a website (23%). – ***Related survey question 17c***

♦ Public spaces with grassy areas are more important than private lawn areas with public parks topping the list of priorities. – ***Related survey question 17b***

Venue	% of Respondents
Public Parks	82.5
Ball Fields	56
Schools	40
Private Homes	22
Public Buildings	11

♦ Sufficiency of the water supply tops the list of concerns for the average respondent (78%), followed by rapid growth (54%), conservation practices (34%) and the cost of water (32%). It should be noted in another section of the survey, only 17 percent (17%) of respondents stated they would conserve water only to save money on local utility bills, 18 percent (18%) were neutral and 55 percent (55%) indicated saving money on monthly bills is not or will not be a primary consideration in their decision to participate in water conservation. – ***Related survey questions 17d, 19s***

♦ Respondents regularly check for and repair indoor and outdoor water leaks (93%). They purchase and install water efficient fixtures, showerheads and appliances (74%). - ***Related survey questions – 15, 18 a, 18b***

♦ The process to develop an annual water budget for indoor and outdoor consumption is a source of confusion among respondents. Thirty-eight percent (38%) stated they know how to budget; 42 percent (42%) do not; and 19 percent (19%) did not respond to the question. – ***Related survey question 18d***

♦ The majority of respondents (84%) conserve water to sustain the resource and protect the environment. Seventy two percent (72%) agree that water conservation supports the region’s economy and ecosystem; seventy eight percent (78%) conserve to preserve the resource for future generations. - ***Related survey questions 18g, 19o, 19w***

♦ Eighty eight percent (88%) agree that water conservation is about efficient water use and water supply management. Thirty five percent (35%) report they understand the purpose of the Prescott Active Management Agency; 32 percent (32%) were neutral; and 22 percent (22%) do not understand. Twenty two percent (22%) report that they will only conserve water if the water saved is allocated to safe yield; 27 percent (27%) were neutral; and 38 percent (38%) did not correlate the need for water conservation with achieving safe yield. - ***Related survey questions 19f, 19j, 19r***

♦ Sixty four percent (64%) of respondents agree that water rates should be higher for customers who do not conserve. Eighty one percent (81%) do not believe people should be able to use as much water as they want, even if they can afford to pay. – ***Related survey questions 19a, 19t***

- ◆ Respondents are not adverse to government regulation. Forty five percent (45%) believe that government should adopt laws limiting the size of private property lawns; 14 percent (14%) are neutral; and 33 percent (33%) disagree. On the other hand, when it comes to public building lawns, 65 percent (65%) agreed that laws should be adopted limiting their size; 14 percent (14%) were neutral; and 17 percent (17%) disagree. Sixty one percent (61%) of respondents disagree that water use is a personal choice requiring no government regulation; 17 percent (17%) believe no regulation is necessary; and 15 percent (15%) are neutral. – *Related survey questions 19c, 19d, 19aa*
- ◆ The majority of respondents (59%) agree government should spend tax dollars to promote water conservation. Fourteen percent (14%) disagree. – *Related survey question 19b*
- ◆ Respondents associate the need for water conservation with population growth. Thirty three percent (33%) believe that if they conserve water it will only benefit new growth and development; seventeen percent (17%) are neutral and 43 percent (43%) disagree. Forty five percent (45%) are convinced that limiting growth rather than water conservation is the best method to preserve the water resource; 19 percent (19%) are neutral and 26 percent (26%) disagree. – *Related survey questions 19p, 19u*
- ◆ The importance of cost to the average respondent cannot be readily deduced from survey results:
 - Respondents stated that they are more likely to purchase water efficient appliances and fixtures if incentives are available (57%). – *Related survey question 19g*
 - Respondents are not more likely to remove a portion of their lawn if they receive a cash incentive (44%) with 22 percent (22%) neutral. Seven percent (7%) report they would be more likely to remove a portion of their lawn if they received a financial incentive. – *Related survey question 19h*
 - Forty one percent (41%) do not consider it too expensive to purchase water saving toilets and appliances; 27 percent (27%) were neutral; and 22 percent (22%) consider the expense too great. – *Related survey question 19n*
 - Respondents do not consider the cost of their monthly water use an incentive to conserve (55%); 18 percent (18%) were neutral; and 17 percent (17%) will conserve to save on their monthly costs. – *Related survey question 19s*

CENTRAL YAVAPAI COUNTY RESPONDENT CHARACTERISTICS AND PERCEPTIONS

Total of 2,925 completed surveys were returned and evaluated

- ◆ The majority of respondents receive water delivered through a municipal system (80%). They pay attention to their monthly water usage (80%). – *Related survey questions 2 and 4*
- ◆ They live in an area not governed by a homeowner's association (68%) in a residence less than 1,800 square feet in size that includes water efficient appliances and/or fixtures (72%). Forty one percent (41%) of

respondents live in homes that are 10 to 30 years old; 21 percent (21%) in homes less than five years old; 20 percent (20%) in homes more than 30 years old; and 19 percent (19%) in homes five to ten years old. -

Related survey questions 5, 6, 7, 8

♦ Seventy eight percent (78%) do not have lawns, but 83 percent (83%) do have plants, trees and shrubs that they regularly water during the morning (65%) or in the evening (34%). Forty nine percent (49%) of respondents with irrigation systems report they reset timers seasonally. - ***Related survey questions 9, 10, 13, 14***

♦ When selecting plants to install in their landscapes, respondents first consider water use (76 %), followed by maintenance (70%), cost (35 %) and fire safety (26%). - ***Related survey question 17e***

♦ Seventy-three percent (73%) designed their yards to be low-water use with no grass area. They claim to understand the principles of outdoor water conservation (81%), but only 51 percent (51 %) stated they understand the seven steps to Xeriscape and the efficiency of drip irrigation. Forty four percent (44%) do not water their native vegetation; 32 percent (32%) do.. – ***Related survey questions 18c, 18e, 18f, 18h***

♦ Respondents have a perception that the installation of automatic sprinkler systems will conserve water (59%). They consider the use of handheld hoses to be wasteful (44%) with 28 percent (28%) neutral. They are not convinced that 50 percent (50%) of household water use can be attributed to outdoor consumption. – ***Related survey questions 19i, 19m, 19x***

♦ The majority of respondents are confused about rainwater harvesting. Thirty nine percent (39%) of respondents disagreed with the statement “If I harvest rainwater for outdoor watering, I can plant whatever I want.” Twenty-eight percent (28%) were neutral, and 25 percent (25%) agreed. Sixty percent of respondents (60%) do not want harvested rainwater to be the only water permitted for outdoor watering; 22 percent (22%) were neutral; and only 11 percent (11%) agreed that harvested rainwater should be the only source for outdoor use. – ***Related survey questions 19l, 19y***

♦ Respondents overwhelmingly prefer to receive information about water conservation programs in a printed format. - ***Related survey question 17a***

Dissemination Method	% of Respondents
Utility bill inserts	71
Newspaper	44
Direct Mail	47
E-mail	17
Website	12
Radio	8.9
Television	11.5
Public Event	7

♦ They would rather receive education through newspaper articles (61%), at the place where they purchase their plants (44%), through other publications (32%), from a professional gardener (24%) and/or via a website (23%). – ***Related survey question 17c***

♦ Public spaces with grassy areas are more important than private lawn areas with public parks topping the list of priorities. – *Related survey question 17b*

Venue	% of Respondents
Public Parks	85
Ball Fields	57
Schools	42
Private Homes	26
Public Buildings	11

♦ Sufficiency of the water supply tops the list of concerns for the average respondent (78 %), followed by rapid growth (54 %), conservation practices (33 %) and the cost of water (30%). It should be noted in another section of the survey, only 18 percent (18%) of respondents stated they would conserve water only to save money on local utility bills, 19 percent (19%) were neutral and 53 percent (53%) indicated saving money on monthly bills is not or will not be a primary consideration in their decision to participate in water conservation. – *Related survey questions 17d, 19s*

♦ Respondents regularly check for and repair indoor and outdoor water leaks (94%). They purchase and install water efficient fixtures, showerheads and appliances (73%). - *Related survey questions – 15, 18 a, 18b*

♦ The process to develop an annual water budget for indoor and outdoor consumption is a source of confusion among respondents. Thirty-nine percent (39%) stated they know how to budget; 41 percent (42%) do not; and 20 percent (20%) did not respond to the question. – *Related survey question 18d*

♦ The majority of respondents (84%) conserve water to sustain the resource and protect the environment. Seventy one percent (71%) agree that water conservation supports the region's economy and ecosystem; and seventy eight percent (78%) conserve to preserve the resource for future generations. - *Related survey questions 18g, 19o, 19w*

♦ Eighty nine percent (89%) agree that water conservation is about efficient water use and water supply management. Thirty four percent (34%) report they understand the purpose of the Prescott Active Management Agency; 31 percent (31%) were neutral; and 22 percent (22%) do not understand. Thirty percent (30%) report that they will only conserve water if the water saved is allocated to safe yield; 28 percent (28%) were neutral; and 36 percent (36%) did not correlate the need for water conservation with achieving safe yield. - *Related survey questions 19f, 19j, 19r*

♦ Sixty four percent (64%) of respondents agree that water rates should be higher for customers who do not conserve. Eighty percent (80%) do not believe people should be able to use as much water as they want, even if they can afford to pay. – *Related survey questions 19a, 19t*

♦ Respondents are not adverse to government regulation. Forty two percent (42%) believe that government should adopt laws limiting the size of private property lawns; 16 percent (16%) are neutral; and 36 percent (36%) disagree. On the other hand, when it comes to public building lawns, 64 percent (64%) agreed that laws should be adopted limiting their size; 13 percent (13%) were neutral; and 20 percent (20%) disagree. Fifty six

percent (56%) of respondents disagree that water use is a personal choice requiring no government regulation; 21 percent (21%) believe no regulation is necessary; and 16 percent (16%) were neutral. – *Related survey questions 19c, 19d, 19aa*

◆ The majority of respondents (58%) agree government should spend tax dollars to promote water conservation. Seventeen percent (17%) disagree. – *Related survey question 19b*

◆ Respondents associate the need for water conservation with population growth. Thirty six percent (36%) believe that if they conserve water it will only benefit new growth and development; seventeen percent (17%) were neutral and 40 percent (40%) disagree. Forty seven percent (47%) are convinced that limiting growth rather than water conservation is the best method to preserve the water resource; 19 percent (19%) are neutral and 28 percent (28%) disagree. – *Related survey questions 19p, 19u*

◆ The importance of cost to the average respondent cannot be readily deduced from survey results:

- Respondents stated that they are more likely to purchase water efficient appliances and fixtures if incentives are available (59%). – *Related survey question 19g*

- Respondents are not more likely to remove a portion of their lawn if they receive a cash incentive (43%) with 23 percent (23%) neutral. Nine percent (9%) report they would be more likely to remove a portion of their lawn if they received a financial incentive. – *Related survey question 19h*

- Forty one percent (41%) do not consider it too expensive to purchase water saving toilets and appliances; 26 percent (27%) were neutral; and 24 percent (24%) consider the expense too great. – *Related survey question 19n*

- Respondents do not consider the cost of their monthly water use an incentive to conserve (53%); 19 percent (19%) were neutral; and 18 percent (18%) will conserve to save on their monthly costs. – *Related survey question 19s*

LARSON, K. REPORT

Chapter 4 – Results of Regional Water Conservation Opinion Survey

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2.0 Survey Background and Description

The survey was sponsored by the Central Yavapai Water Conservation Partnership. It was distributed widely throughout area through free newspapers, direct mail to water customers, Town, City and County websites, and made available at water bill pay stations and community fairs. The survey was also advertised over the radio. A total of 2,925 homeowners responded to the survey (about 7 percent of the total housing units in the survey area). The survey consisted of over 50 questions regarding irrigation water use habits, housing and lot characteristics, landscaping type, preferences regarding how people receive conservation information, and opinions regarding the area's water resources issues. The findings were tabulated by the City of Prescott and provided to Larson and Associates for further analysis as part of this project.

2.1 Survey Results and Key Findings - Summary

Several key findings of the survey results are summarized below.

1. Eighty-eight percent responding are served by a city or private water company. This indicates water providers are a key avenue for communication of conservation programs (Question 2)
2. Sixty-two percent live in homes older than 10 years, indicating a significant potential in the area for indoor plumbing retrofits. (Question 6)
3. Almost 50 percent of respondents live on lots larger than 10,000 sq. ft. (Question 8)
4. Seventy-eight percent responded they had no turf on their lot and only 4 percent said they had more than 1000 sq. feet of turf. (Question 9)
5. Thirteen percent responding said they irrigated daily (Q. 12). This clearly indicates a need for education concerning efficient watering techniques. Further analysis of the data submitting on watering times and the # of days of watering is also revealing. This data is summarized in Table 4.1 below. About 22 percent are irrigating more than 3 days per week, which is clearly not efficient and can result in significant over-watering. In keeping with the overall response, 8.5 percent said they watered daily.
 - a. Of those respondents, 35.5 percent reported watering times of 30 minutes or more. Among those watering 4 times per week, 28 percent had run times exceeding 45 minutes.
 - b. Among those watering 2-3 times per week, between 5 and 11 percent exceed either 90 or 60 minutes respectively. This data indicates that a high percentage of respondents on this question (perhaps as many as 20 to 25 percent) appear to be significantly over-irrigating.

- c. Even more striking is that homeowners that responded to the survey can be assumed to be more concerned with the region's water issues than the average citizen.

Table 4.1
Irrigation Watering Time - Response Summary

Times per Week	Number of Repond.	Percent of Total	Range of Minutes	Standard	Homes that Exceed	Percent that Exceed
1	87	6.7	5 to 240	>180	1	1.1
2	357	27.7	10 to 300	>90	40	11.2
3	573	44.5	10 to 180	>60	30	5.2
4	117	9.1	5 to 180	>45	33	28.2
5	39	3.0	10 to 90	>30	5	12.8
6	6	0.5	1 to 60	>=30	1	16.7
7	110	8.5	5 to 60	>=30	39	35.5
Total	1289					

Note: Based on partial tabulation of respondents (1289 respondents)

6. About 28 percent responding do not have automatic timers. Of the 72 percent that do, only 54 percent reset timers seasonally or monthly. Fourteen percent never reset their timer or do not know how to. Clearly, information and education on when and how to reset timers would yield conservation dividends. (Q. 13)
7. Ninety-seven percent responding said they water either in the morning or the evening. The message of not watering in the heat of the day has clearly been heard. (Q. 14)
8. Direct mail (48.2%), utility bill insert (70.8%), and newspaper (44.4%) were by far the preferred method to receive water conservation information. Website, Email, Television and Radio all scored low in comparison (at 11.9 %, 17.0 %, 11.5%, and 8.9% respectively. (Q. 17a)
9. Lawn areas on parks, ball parks, and schools were preferred (85.2%, 56.7%, and 42.2% approval respectively). Turf areas at businesses and public buildings received low approval ratings (2.7% and 10.6% respectively). Turf at private homes received a 26.4 % approval rating, which corresponds approximately to the number of respondents that say they water turf at home. These results have applicability when considering possible ordinances and city policies (Q. 17b).
10. News articles (60.8%) and retail Nursery 43.9%) were rated highest for ways of obtaining information on outdoor irrigation and design. (Q. 17c)
11. Overall, responses indicated respondents as a whole are very highly informed and motivated about implementing water conservation and concerned about the region's water resources. (Q. 17e, 18b, 18c, 18g are examples)
12. In spite of being motivated to conserve, 41 percent said they do not know how much water to "Budget" for indoor and outdoor use. This indicates a significant educational opportunity exists regionally with regard to efficient irrigation practices. (Q. 18d,). Fifty seven percent said they would like to learn more on how to conserve water outdoors. (Q. 18i)

13. Only 5 percent responding said their children bring home information from school on water conservation. Adjusted for the 65 percent that did not respond (presumably because they do not have children in the home) this is about 12 percent that responded positively to this question. This indicates that school programs should probably be considered long-term investments in educating the next generation and probably will not produce significant near-term (next five years) reductions in water use.
14. Respondents were split evenly on support for ordinances restricting turf at private residences. There was more support for turf restrictions at public buildings. Sixty –three percent were in favor of higher water rates for those that don’t conserve. Twenty-three percent responded that it is too expensive for them to replace high water use toilets and appliances. Forty-five percent responded that limiting growth is the way to preserve the region’s water supplies. Thirty-five percent said water conservation efforts will only benefit new growth and development (Q. 19).
15. Exempt Well Users – A subset of the data was obtained to see how exempt wells users responses (335) compared with the respondents as a whole. Some interesting differences were noted: The average persons per household is slightly higher than survey respondents as a whole (2.2 pph for 123 respondents). Only 3% live on standard size lots as opposed to 50%. Sixty-five percent reported having no turf as opposed to 78 % for all respondents and 11% have over 1000 s.f. of turf as opposed to 4% for all respondents. A conclusion that can be reached from this data is that overall per residential water use is likely higher for exempt well users than for those receiving water from a city or private water company and that a relatively high conservation potential exists for exempt well users in the Coalition area.
16. There were many survey respondent written comments among well owners regarding the growth issues related to water supply
17. The general location of exempt well owner respondents was as follows, according to Zip Code: 67 % Chino Valley, 9% Prescott, 8% Paulden, 3% Prescott Valley, 10% Dewey-Humboldt, and 3% other.
18. Thirty-two percent of responding said they water native vegetation at least monthly. This fact coupled with the fact that more than 50 percent live on lots larger than 10,000 sq. ft. indicates a significant conservation potential in educating the public on the minimal irrigation needs of native vegetation.

2.3 Larson, K. - Opinion Survey Conclusions and Recommendations

Results of the survey provide several important insights regarding how future regional conservation program efforts should be targeted to maximize program effectiveness. These recommendations include, but are not limited to the following:

1. A significant portion of respondents, though motivated to conserve water, are over-irrigating because they do not have knowledge of proper irrigation techniques and how much water is needed by their landscape. More intensive education and awareness programs targeted at these water uses would help increase outdoor water use efficiency in the Coalition area.
2. The best method of providing conservation program information, according to respondents is print media, including newspapers, magazines, direct mail, and brochures provided at nurseries and public events. Regional programs of this nature could be effective in educating more water users on efficient outdoor irrigation techniques and other conservation program initiatives.
3. Exempt well users live on larger lots, irrigate significantly more turf than the average survey respondent. This suggests there exists a significant conservation potential exists for conservation programs targeted at homeowners supplied from wells.
4. Sixty-two percent of respondents live in homes older than 10 years, indicating there is a significant potential for regional water savings through indoor fixture retrofit and/or replacement programs, including financial incentive programs. The percentage of homes older than 10 years among respondents is approximately equal to that for the Coalition area as a whole.
5. Sixty-six percent of respondents support turf restrictions for public buildings, while 42 percent favor limitations on private lawns. Any consideration of regional conservation ordinances regarding landscaping restrictions should consider these results.

CONCLUSIONS AND RECOMMENDATIONS

For any water conservation education effort to be effective, it must make information available through print media, publications and direct mail, as well as offer education where people buy their plants. Across the board, respondents want to learn more. The city will be best served if water conservation is uncomplicated with practices that are easy to implement supporting the long-held belief by water conservation professionals that “water conservation in practice is low-tech and everyone can participate.” The City of Prescott’s current efforts are appropriate based on survey results.

- Its development of a printed water conservation workbook and the WaterSmart card series are and will continue to be exceptional communication and education tools for this market. A combination of tiered water rates with continued public education is an effective strategy to promote water conservation. It should be continued and expanded.
- Electronic media should be a component of the overall education effort, but the major emphasis should be placed on the delivery of printed information through direct mail, publications, and newspaper publicity. People will use web tools, but they must be directed to a specific resource or resources through printed materials.
- Financial incentives are a contributing factor for respondents. A majority stated that when purchasing new appliances and/or fixtures, they would be more likely to buy if an incentive was available. Current incentives should be regularly evaluated to insure time and money expended in program management justifies the estimated water savings. Future expansion of should target incentives to reduce outdoor water use, not indoor consumption. Personnel and financial resources should be focused on efforts to reduce outdoor water use. As a side note, The State of Arizona recently approved a tax credit of 25%, or up to \$1,000, for taxpayers who install a system to harvest grey water and/or rainwater (www.azdor.gov).
- The tiered water rate structure adopted by the City of Prescott in the spring of 2006 is an effective water conservation tool. Although responses appear contradictory on the relationship between cost and the ability and desire to participate in water conservation, it is a general market rule that the average consumer becomes more concerned as costs increase. A good correlation is the current increase in gasoline prices. As the cost increases, consumers are thinking of ways to save. They are again considering carpools, combining trips, riding their bikes and walking, as well as trading in high gasoline users for smaller, more efficient models and hybrids.

The majority of respondents claim to comprehend the principles of Xeriscape and have low-water use landscapes with little or no lawn areas. Historic outdoor water use; however, tells a different story with heavy spikes in usage during the months of May, June and July.

Over a third of respondents regularly water their native vegetation. The conclusion to be drawn is that people are over watering. They do not know what to water, how to water or have a clear understanding of the amount of water needed to maintain healthy landscapes. Respondents do not have a grasp on rainwater harvesting, but are interested and want to learn more.

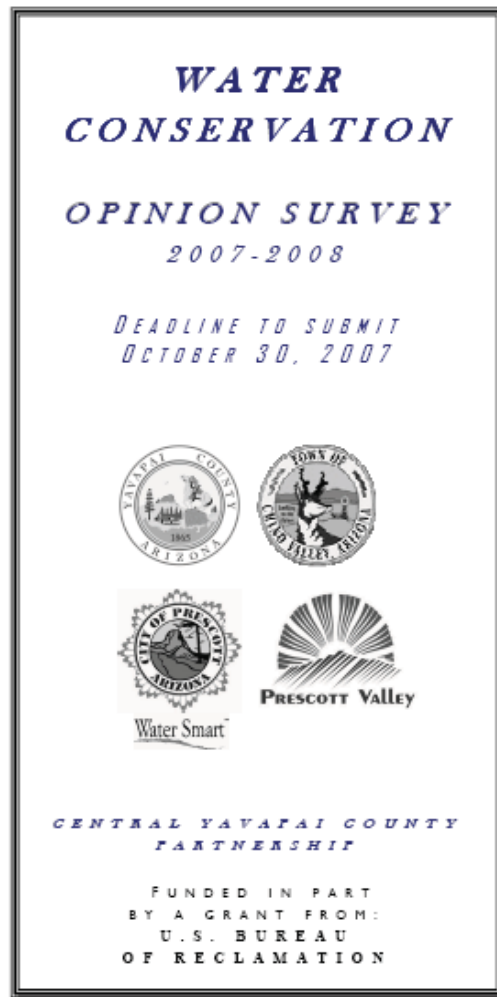
1. The city's focus on reduction of outdoor water consumption should continue. Communication should be consistent and frequent. Efforts should include:
 - (i) A series of newspaper articles geared to low-tech water conservation, information on the amount of water necessary to maintain a healthy WaterSmart landscape, how to budget, the correct use of watering tools, and rainwater harvesting.
 - (ii) A brief quarterly newsletter inserted in utility bills providing information on water conservation best practices.
 - (iii) Development of a water conservation workshop(s) led by professional gardeners and offered at local nurseries as part of the city's summer recreation program. Dates and times with a brief description of the course content should be included in the city's recreation guide mailed to all households, as a utility bill insert, and through a news release. This will require partnerships with and the cooperation of local nursery owners. Workshops should emphasize:
 - a. the proper use of tools (i.e. handheld hoses, irrigation systems);
 - b. how to budget indoor and outdoor water use;
 - c. what to water, how much and how often; and
 - d. rainwater harvesting
 - (iv) An increase in water audits to help municipal customers better understand their usage and how to budget their consumption. This will have the dual impact of also assisting consumers in reducing their indoor water use.

An effective program will include a combination public education, tiered water rates, and incentives for reduction of outdoor water use. Resources should be allocated based on the estimated impact an activity has on water use. (i.e. If \$30,000. is available for public education and 30 percent of residential water consumers live in areas governed by homeowner's associations, \$9,000 of the total budget should be allocated to education of homeowner's groups.) It must be noted that this survey and resulting analysis only address residential water consumption. To develop a comprehensive, accurate picture of overall outdoor water consumption, commercial use patterns must be incorporated.

When comparing City of Prescott results with those of the region, there is little or no difference. Any fluctuations in characteristics and perceptions are so small as to be inconsequential.

Although the majority of respondents associate population growth with the need for water conservation, they are still willing to conserve water and open to increased information and expanded education. They are also convinced that limiting growth will conserve water. Nearly all respondents consider water conservation to also be an environmental issue; they feel an obligation to conserve the resource in order to protect the environment and local ecosystem, as well as sustain the resource for future generations.

Central Yavapai Regional Partners



Water Conservation Opinion Survey

FINAL SURVEY DATA SUMMARY RESULTS

2925 survey respondents entered
SURVEY MONKEY TABULATION - MARCH 13, 2008

-TARGET AUDIENCE –

80,000 RESIDENCE IN THE PRESCOTT AMA

Including Cities and Towns in Central Yavapai County
Ash Fork, Bagdad, Chino Valley, Camp Verde, Dewey-Humboldt
Iron Springs, Mayer, Paulden, Prescott and Prescott Valley