

APPENDIX B
FRESNO/CLOVIS AND SURROUNDING AREAS PILOT
PROJECT

KINGS BASIN DISADVANTAGED COMMUNITIES PILOT STUDY

FRESNO CLOVIS AND SURROUNDING AREAS SUB-REGION PILOT SURVEY

FINDINGS FROM THE EASTON AND SURROUNDING AREAS HOUSEHOLD SURVEY

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INTRODUCTION

The Upper Kings Disadvantaged Communities Pilot Study sought to identify water related needs of disadvantaged communities, facilitate joint solutions, and help advance regional projects that address the water needs of disadvantaged communities. This study was funded by Department of Water Resources and sponsored by the Upper Kings Basin Water Authority. Project Team members included, Provost and Pritchard, Community Water Center, and Self Help Enterprises.

Residents from Easton, California and its immediately surrounding area participated in the study. During a sub-regional meeting, residents decided they wanted to document how people's wells are working, document their perceptions of water, and ask them how interested they are in having a regional water system in their area. To do this, they decided a community survey was the best approach.

The Alliance for Community Research and Development (ACRD) is a community-based research firm that facilitates measurement and evaluation projects for Central Valley organizations in partnership with universities and community colleges. The Project Team hired ACRD to implement the community survey, manage the data entry and analysis, and summarize the survey findings.

METHODS

The Project Team and community members developed a community survey to be conducted as a household survey for a representative sample of the community. It would be completed during an interview with a team member over a 10 to 15 minute period. The survey asked about the property's well water quality, characteristics and experiences with the private well, and about the participant's interest in various options for water supply. The Project Team translated the survey into Spanish and created a slightly modified version for use with businesses.

The Project Team and ACRD determined a sampling plan for Easton and two surrounding areas with the goal of reaching at least 20% of residences. This represented approximately 120 residences with exiting addresses (approximately 90 properties identified on maps of the region did not have an address). ACRD prepared six students from the University of California (UC) Merced to conduct the household survey. Each student was bilingual in English and Spanish, and had prior surveying experience. The Project Team felt it was important to prepare community members to assist with survey implementation because their familiarity with the community could help to ensure a more complete and faster survey process. Eight community members and two California State University Fresno students working with the community members were trained on surveying procedures through brief lectures and practice with the UC Merced students. The training and overall quality assurance of the survey process was supervised by a senior-level researcher.

The household survey was conducted between February 16 and March 3, 2013. Surveying of households occurred on the weekends between 11am and 5pm each day. Surveying of businesses occurred between 5pm and 8 pm on weekdays. Surveying was conducted in pairs to ensure safety. Surveyors were advised to avoid approaching any setting that appeared unsafe for any reason. Surveyors completed a daily log to document the addresses they approached, completion of surveys, and any reasons for not completing a survey. Houses that were listed on the sampling plan but did not answer were tracked and revisited at least once. Survey completion rates were reviewed throughout each day and refinements were made to ensure a sufficient sample from each geographic area.

SUMMARY OF FINDINGS

Survey Completion Rate

Three regions were targeted by the community survey. Oversampling of each region was used to make up for the approximately of 65% of residences across the three regions where no one answered the door or were unsafe to approach. As a result, 240 residences were reached, of which 142 (59%) completed a survey. Twenty-four (17%) of completed surveys were conducted in Spanish. As an exploratory examination, 18 businesses were surveyed (one in Spanish). Six household surveys were not included in the analysis due to missing data, resulting in a final sample of 136 household and 18 business surveys available for analysis. This report focuses on the findings from the residences as the primary participants of the survey.

Participant Characteristics

Several survey items assessed participant characteristics that may have influenced the nature of their response. These included demographics of residents and descriptions of the residence possibly related to the use of water from private wells. The following is a common profile of participants.

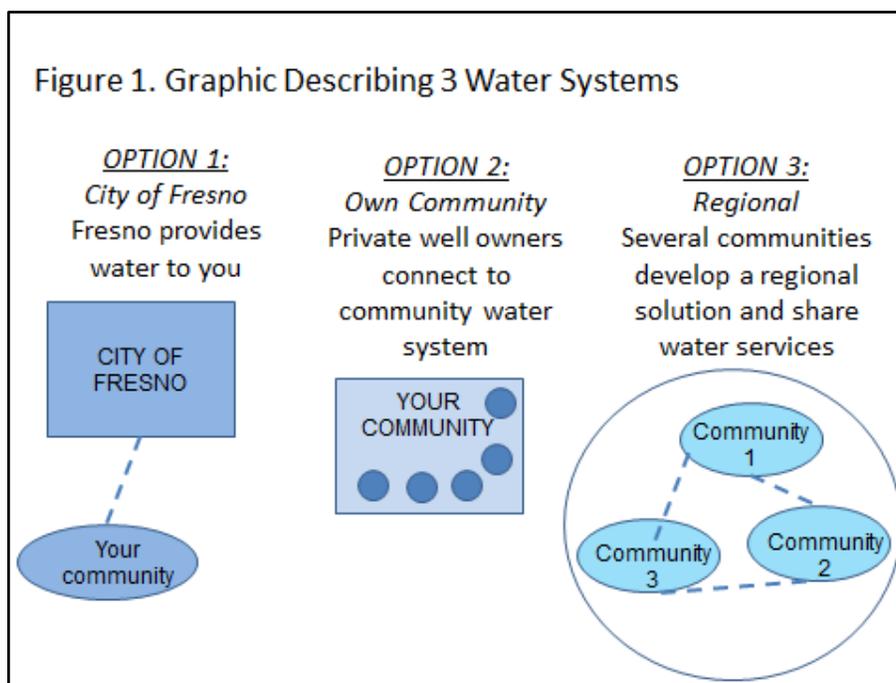
- Latino (52%) or White/European (43%)
- Speak English (89%)
- Lived in community 15 years or more (66%)
- Live in single-unit residence (87%)
- Own their home (71%)
- Use well for water (nearly 100%)
- Use their own well/no sharing (73%)

Understanding the Community's Interest in Three Water Systems

The survey was designed to understand the community's interest in a regional water system that can provide a safe and reliable water supply. Three options for a regional water system were provided to survey participants.

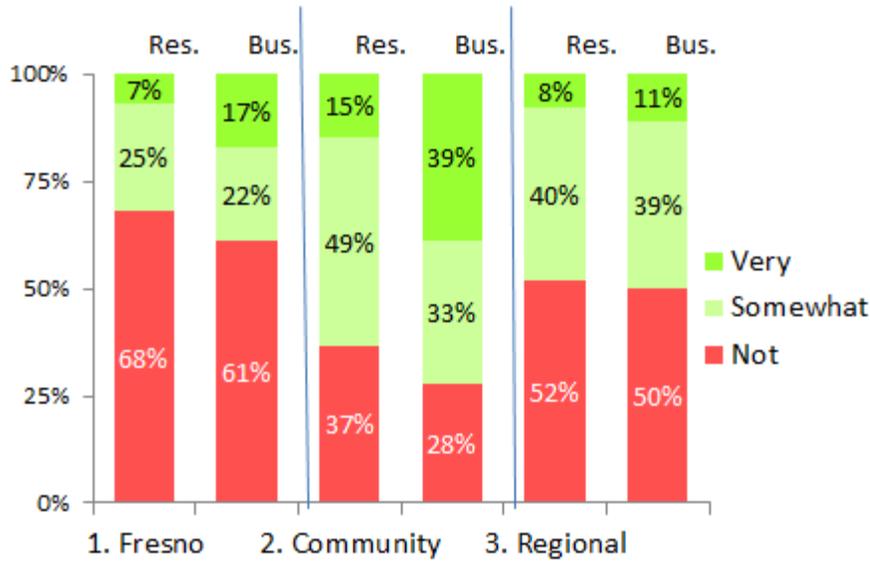
- Option 1. Developing a water system where residents would purchase water from the City of Fresno.
- Option 2. Developing a water system for the community to manage and provide water to residents.
- Option 3. Developing a water system for the community in collaboration with surrounding regions.

Participants were asked to rate their interest for each system as "not interested," "somewhat interested," and "very interested." Surveyors were instructed to describe the water systems using the graphic in Figure 1 and to not provide any other information (such as what may be good or bad about each option).



Preferences for the water systems were examined separately for business and residential survey participants (Figure 2). The pattern of preferences for the three water systems was similar for residential and business participants. Of 136 residential surveys, 64%, 48% and 32% were interested in option 2, 3 and 1 respectively (with responses for somewhat and very interested combined). This compares to 72%, 50%, and 39% for the same order of the options (2, 3, and 1) for the 18 businesses that completed a survey.

Figure 2. Interest in 3 Water System: Residences vs. Business



Because preferences may vary across rural and urban regions due to different water needs, this factor was examined in the analyses. Figure 3 shows preferences for Easton (central), Easton rural, and Orange Center (a rural area). Similarities appear across the three regions. Easton and Orange Center regions follow a more similar pattern of stronger to weaker preference from option 2, 3 and 1. Easton rural region equally prefers water system option 2 (own community) and option 3 (regional system) much more than option 1 (relying on Fresno City).

Figure 3. Interest in 3 Water Systems by Region

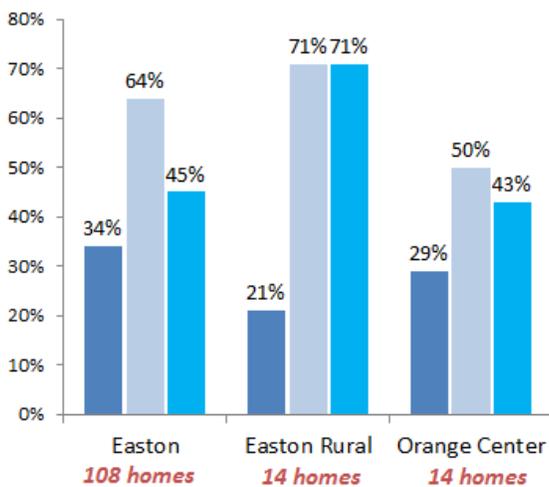
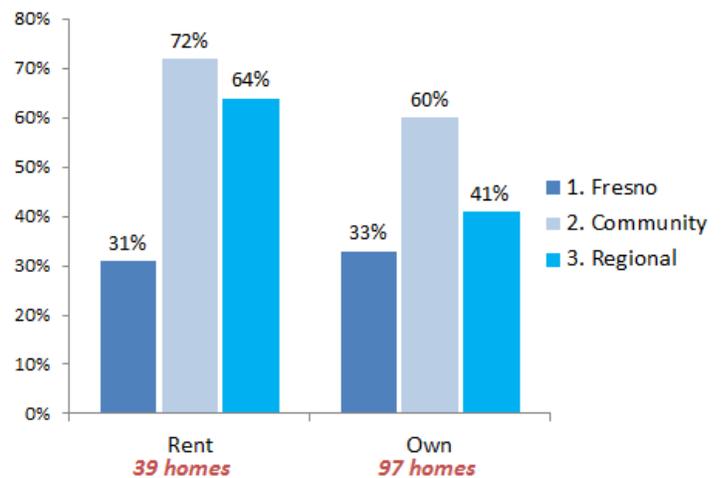


Figure 4. Interest in 3 Water Systems by Residence Type



The preference for different water systems was examined for each type of residence since owners may have different experiences and accountability for their water compared to renters. Figure 4 shows that renters and owners show a similar pattern for their interest in the three options, with a priority for option 2, then 3 and then 1.

A water system that is managed by the local community (option 2) appears to be the most preferred regardless of survey participant (business versus residential), region (rural versus urban), and residence type (owned versus rented).

Clarifying the Reasons behind the Community's Interest in the Three Water Systems

Participants were asked about certain factors regarding their well water in order to understand their preference for the three water systems. These factors included concerns with well water quality, knowledge or belief of well water contamination, costs of well repairs, and overall happiness with their well water.

Figure 5. Water System Interest by Concern for Well Water Quality

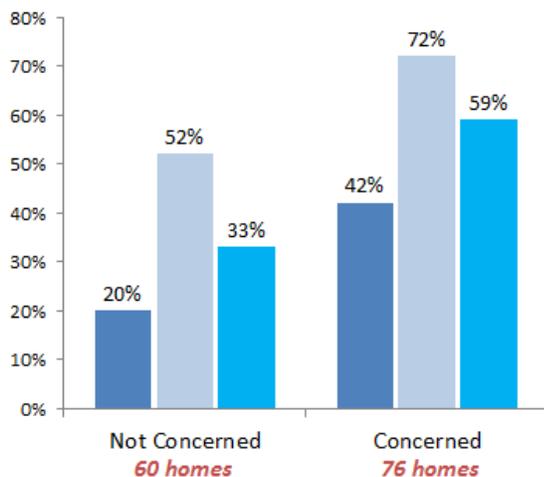
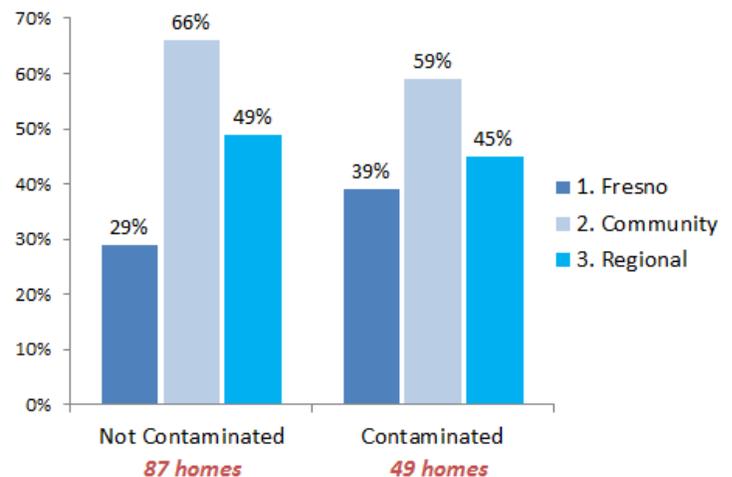


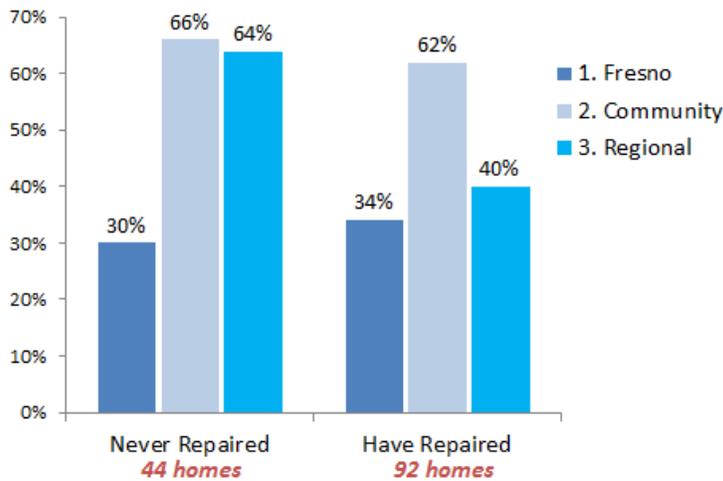
Figure 6. Water System Interest by Knowledge or Belief of Well Water Contamination



As seen in earlier analyses, option 2 continued to be the most preferred option regardless of one's concern for the well's water quality and knowledge or belief that their water may be contaminated. Option 3 and then option 1 followed in popularity. People who expressed concern for their water quality were more likely to prefer each option more than people without an expressed concern. Surprisingly, only 49 homes (36%) knew or believe that their water was contaminated.

Ninety-two residences (68%) reported having had to make a well repair at some point. Figure 7 shows that option 2 (the community water system) is the most popular for both those with and without prior well repairs. However, those who have never had a repair were almost as likely to prefer option 3 (a water system that may be collaboratively managed with other communities in the region). Option 3 (relying of the City of Fresno for water) continues to be the least preferred.

Figure 7. Water System Interest by Well Repairs



For each of the three water systems, participants were asked to provide all of the reasons that they were against it. One person could provide more than one response. The top three reasons across all participants are summarized in Figure 8. Interestingly, the same three reasons were in the top 3 for each water system.

Figure 8. Top 3 Reasons *AGAINST* Each Water System**

1. Fresno	2. Community	3. Regional
Don't want to be taken over by another entity	Don't want to be taken over by another entity	Don't want to be taken over by another entity
I'm happy with my private well	I'm happy with my private well	I'm happy with my private well
Too expensive	Too expensive	Too expensive
Don't want chlorine in water	Right now I don't pay a bill	My water is good
Don't want meters. I use as much as I want		

** More than 3 responses are shown due to ties for "top 3."

Interest in Keeping Own Well Compared with Interest in the Optional Three Water Systems

As the information in Figure 8 may suggest, community members may be happy with their own well even though they may have concerns about the costs and restrictions related to other water systems. Survey participants were asked to select one option from four possibilities: keeping their own well (not changing anything) or one of the other three water systems.

Figure 9. The “One” Option MOST Interested In

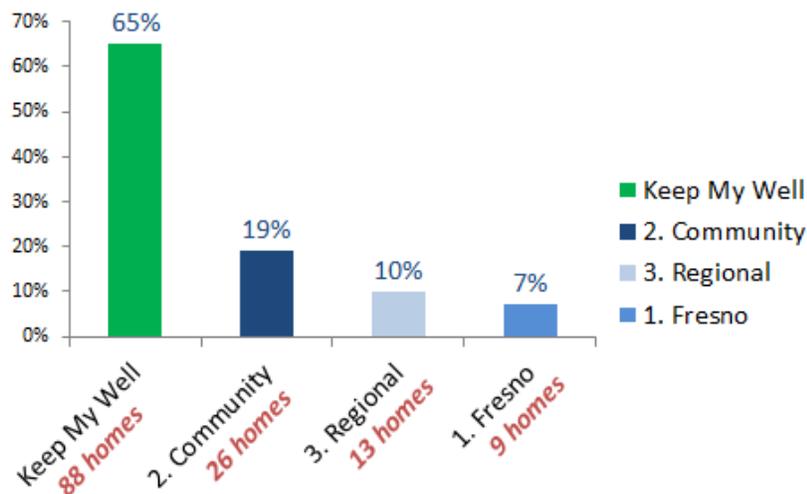
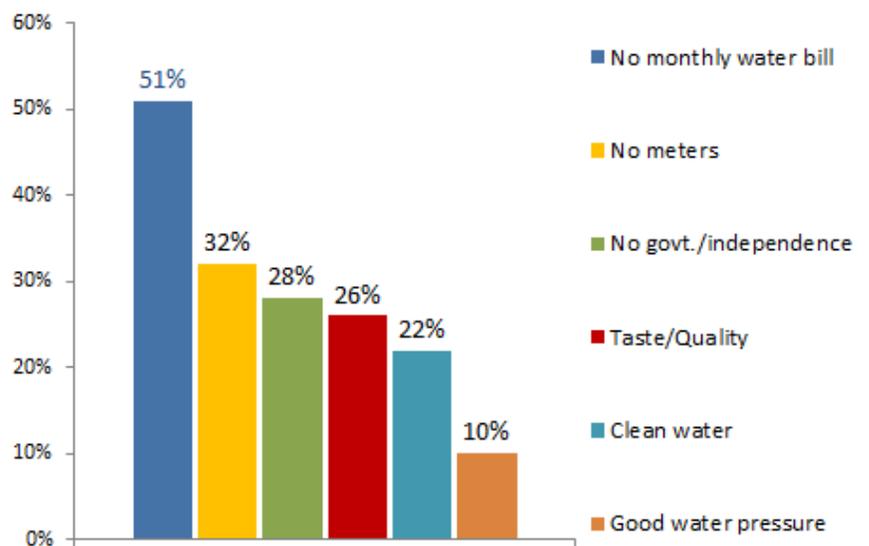


Figure 9 shows that most community members who completed a survey would like to keep their private well. The other three options ranked in popularity similarly to the earlier analyses: option 2 (community water system), followed by option 3 (a shared water system with other communities in the region), and then followed by option 1 (a City of Fresno water system).

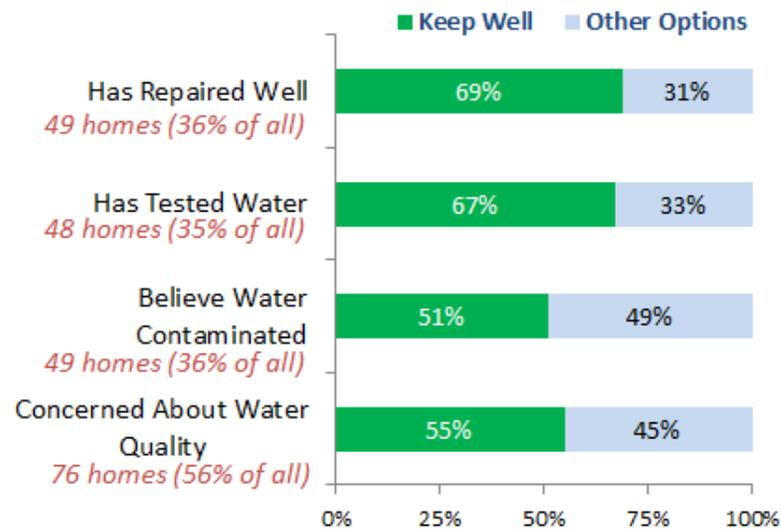
Figure 10. Reasons People Like a Private Well

Figure 10 shows all of the reasons people reported for liking a private well. The reasons reported here parallel the reasons given for not liking the other water systems in Figure 8. People reported liking their private well because they might avoid expenses (e.g., monthly water bill and metering) and control from external sources (e.g., no government control, wishing for independence).



The factors that were examined in earlier analyses to understand preferences for the three water systems were re-examined in the question asking community members to select only one option (keep their private well or examine one of the three other water systems). The results of this analysis are shown in Figure 11.

Figure 11. Keep Well versus Other Options by Experiences with Water and Well



Across each of these factors, more than half of community members preferred to keep their own well. However, the preference for keeping the private well versus one of the other options was very close (nearly 50% to 50%) among people who knew or believed their water was contaminated and for people who were concerned about the quality of their well water.

Thirty-six percent of all residences reported knowing or believing their well water was contaminated. These perceptions may not be based on actual water testing because only 35% of residences had ever tested their well water for contaminants. However, 69% of residences would like to test or might consider testing their well water for contamination.

Thirty-six percent of all residences reported ever having to repair their well. The average cost of repairs was \$3,300 and the median cost of repairs was \$1,500. This preference for a private well despite the cost of repairs (Figure 11) may suggest a perception that the cost of other water systems may not be less and may be even more expensive than such repairs.

Participants were asked to give their reasons for their preferred water systems. Similar to the reasons provided against the three water systems (Figure 8), the summary of reasons shown in Figure 12 is very consistent. People want a reliable supply of water with reliable water quality in a way that may be sustainable.

Figure 12. Top 3 Reasons for Each Water System & “Keep Private Well”

1. Fresno	2. Community	3. Regional	Keep Well
Want reliable water supply	Want reliable water supply	Want reliable water supply	Want reliable water supply
Want reliable water quality	Want reliable water quality	Want reliable water quality	Want reliable water quality
Interested in sharing cost of water provisions	This [option] is a more sustainable option	Interested in sharing cost of water provisions	This [option] is a more sustainable option

The community survey was designed to capture participants’ preferences knowing that more education and information would be necessary to help community members make final decisions about changes to their water system. Participants indicated that the following information would be most helpful in making decisions about future water systems (listed in order of decreasing frequency).

- 82% Cost of connecting
- 81% Monthly fee
- 75% Benefits to me
- 74% How would this work
- 71% How will be funded
- 71% Pros/Cons
- 65% Governance impact

CLOSING COMMENTS

The community survey of Easton and its immediately surrounding areas indicates that most people are comfortable with using a private well but a substantial number (nearly 40%) are interested in examining other options. Residents are concerned about water quality and contamination and about having a reliable, sustainable, and affordable water system. Help with testing the water quality of their private wells and more information about costs and benefits of options other than a private well would be valuable to residents as they explore their water system options.

