Report:
Community Assessment for Public Health Emergency Response (CASPER): Additional Analysis of Lake County's CASPER

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April 2013

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Acknowledgements

We would like to acknowledge the following persons for their contributions, without which, this endeavor would not have been possible.

Introduction

This document is designed to supplement the November 2012 report, "Community Experiences and Perceptions of Geothermal Venting and Emergency Preparedness in Lake County, California," written by the Centers for Disease Control and Prevention (CDC), California Department of Public Health (CDPH), and Lake County Public Health Division (LCPHD). The report described the Community Assessment for Public Health Emergency Response (CASPER) conducted November 26-28, 2012. This material adds to the Lake County CASPER report in three ways. First it provides an analysis of the CASPER method itself, and the representativeness of the CASPER sample. Second, it offers additional analysis of households with vulnerable populations. Finally, it includes comparisons from the Spring Valley community, an area of Clear Lake that was not selected in the original CASPER sample.

CASPER Method and Representativeness Sample

CASPER uses a two-stage cluster sampling methodology in which 30 census blocks are randomly selected and seven households within each census block are interviewed. This sampling method is designed to rapidly collect reliable and accurate population-based public health information.[1] The two-staged cluster sampling method is both cost-efficient because it is less costly to employ a given sample size in a large area, and statistically efficient because it decreases the amount of random error with which parameters are estimated given a certain sample size.[2] Our sampling frame included all census blocks within or adjacent to the populated areas of Lake County: Clearlake Oaks, Spring Valley, City of Clearlake, Hidden Valley Lake, Cobb, Kelseyville, Lakeport, Middletown, Lower Lake, Lucerne, Nice, and Upper Lake. The sampling frame contained 26,730 of Lake County's 35,492 housing units.[3]

The CASPER sample and the 2010 Census reported similar household size, percent of households with individual over 65, and percent Spanish speakers. The average household size of CASPER respondents was 2.39 compared to 2.48 in the Lake County in the 2010 Census.[4] Thirty-four percent of households had at least one individual over 65, compared to 32% reported in Census. Finally, 5% of the households we interviewed spoke Spanish as their primary language compared with 3% of Lake County residents.

We compared the answers to two CASPER questions taken from the California Health Interview Survey (CHIS) to further validate the representativeness of the sample (Table 1). CHIS is a population-based, random-digit dial telephone survey of households in California. We used CHIS as a validation instrument because it is large enough to provide statistically reliable estimates of health conditions and health-related behaviors in Lake County and data are high quality and accurately represent California's household population.[5]

Analysis of Households with Vulnerable Populations

The primary analysis of CASPER identified vulnerable households with individuals over 65 years or non-native English speakers, and indicated that 30% of households had communication barriers. We compared communication preference, and concern and awareness of geothermal gasses with numbers of individuals over 65 in the household, and found no statistically significant differences. Households with individuals over 65 years old were more likely to have vision or hearing problems; 7% of households had both vision and hearing problems (Table 2). There were no differences in awareness of or concern about geothermal gasses by number of older individuals in a household.

Communication preferences were further analyzed to identify differences among households with vision problems, hearing problems, or trouble understanding English. While participants reported high prevalence of vision and hearing problems (11% and 20% of households, respectively), these households did not have different communication preferences than other households (Table 3). Only households whose individuals had trouble understanding English had different communication preferences during a disaster; they were more likely to prefer cell phone or text message than other modes of communication (Table 3).

Spring Valley

Spring Valley, one community in Lake County, had difficulty evacuating during wildfires in the summer of 2012 due to its remote location and single entry and exit route. At the request of LCPHD, an additional analysis was conducted within the Spring Valley community using the same questionnaire as the CASPER. The Spring Valley cluster identified by LCPDH (census tract #000600, block #5099) consisted of 71 households, and 14 interviews were conducted.

Summary results of Spring Valley interviews are presented in Tables 4-19, which correspond to Tables 1-16 of the Lake County CASPER report. Table 4 reports the questionnaire response percent and rate for Spring Valley, compared to the Lake County CASPER. The low number of Spring Valley household interviewees limits our ability to quantitatively compare interview answers between Spring Valley to Lake County. In the following paragraphs, we note the qualitative differences in responses to interview questions between Spring Valley and Lake County residents.

Spring Valley households tend to be smaller in size, with more people ≥65 years old. Spring Valley homes are more likely to be single family homes, and more likely to have been constructed recently (Table 5). Spring Valley residents are less likely to perceive floods (7%) and more likely to perceive wildfires (86%) as among the greatest emergencies or disaster threats compared to 42% and 66% of CASPER residents, respectively (Table 8). Similar to CASPER participants, 29% of Spring Valley residents who were affected by earthquakes said earthquakes negatively affected their peace of mind (Table 9). The two most preferred methods of receiving

information during an emergency or disaster are television (36%) and landline telephone (29%) for Spring Valley residents (Table 10). None preferred cell phone, which is to be expected based on limited cell phone reception in Spring Valley. Compared to CASPER residents, Spring Valley residents are more likely to have made disaster plans for pets (86% vs. 36%), learned how to safeguard their finances in case of a disaster (86% vs. 60%) and participated in neighborhood emergency planning (29% vs. 12%) (Table 11). Spring Valley residents are also more likely to have had important financial documents (93% vs. 71%), cash (79% vs. 55%), and copies of personal identification (93% vs. 70%) set aside in case of a disaster (Table 15). Spring Valley residents are less likely to cite any given reason for not preparing for an emergency (Table 16).

In response to a mandatory evacuation, 29% of Spring Valley who evacuate will stay in a hotel or motel, compared to 8% of CASPER participants. Spring Valley residents are more likely to use a small water system operated by a homeowners association, less likely to drink tap or faucet water, and more likely to drink bottled water (Table 18). None of the surveyed residents had a private well (Table 19).

Conclusion

This document further describes the representativeness of the surveyed population and identifies needs of vulnerable populations. Our analysis concludes that the CASPER survey succeeded in reaching and interviewing a diverse population and was generalizable to the populated areas of Lake County. Vulnerabilities within a household, including difficulty understanding English language and hearing problems may lead some households to have different communication preferences. Spring Valley households are more likely to contain members ≥65 years old, and are also more likely to have made certain disaster plans and preparations. The few other differences distinguishing Spring Valley residents may reflect recent events (e.g., increased likelihood of perceiving wildfires as a disaster threat) and/or geography (e.g., lack of cell phone coverage explains lack of preference for this medium; lack of private wells in this community). The information in this document should allow LCPHD to better respond to future emergencies or disasters.

Table 1: Comparing survey responses from CASPER and California Health Interview Survey (CHIS) for Lake County, California

	Frequency (n=161)	% of Households	CASPER Weighted % (95% CI)	CHIS Lake County Weighted % (95% CI)	CHIS CA State Weighted % (95% CI)
For how many days would you be able to stay in your home without anyone shopping for additional supplies?					
1 - 3 days	23	14.3	15.2 (8.7 – 21.7)	15.7 (11.0 – 20.3)	21.2 (20.2 – 22.1)
4 - 6 days	22	13.7	11.2 (5.7 – 16.8)	17.5 (13.3 – 21.6)	26.5 (25.6 – 27.4)
7 - 9 days	34	21.1	21.2 (13.3 – 29.1)	21.6 (16.5 – 26.7)	21.6 (20.8 – 22.5)
10+ days	80	49.7	51.3 (41.9 – 60.7)	44.7 (39.9 – 49.5)	30.2 (29.3 – 31.1)
How confident are you that your county's public health system can respond in a way to protect the health of your family and neighbors?					
Very confident	23	14.3	15.4 (6.9 – 24.0)	29.5 (23.9 – 35.0)	29.9 (28.9 – 30.9)
Somewhat confident	68	42.2	39.7 (28.7 – 50.7)	44.4 (38.4 – 50.5)	47.8 (46.6 – 48.9)
Not too confident	34	21.1	23.9 (14.9 – 32.8)	15.6 (11.3 – 20.0)	16.3 (15.4 – 17.3)
Not at all confident	22	13.7	12.6 (6.9 – 18.3)	10.5 (6.5 – 14.5)	6.0 (5.3 – 6.6)
Don't know[1]	13	8.1	7.9 (3.2 – 12.6)	--	--

1. Unknown answers were imputed in CHIS results

Table 2: Preferred communication methods and communication barriers by number of individuals over 65 in a household, Lake County, California.

	Number of 65+ year-olds in household			CASPER Weighted % (95% CI)
	0 (n = 104)	1 (n = 35)	2 (n = 22)	
Preferred method of receiving information				
Television	35(33.7)	15(42.9)	5(22.7)	32.9 (24.9 – 40.9)
AM/FM Radio	17(16.4)	4(11.3)	7(31.8)	19.0 (9.4 – 28.5)
Text message	8(7.7)	1(2.9)	0	6.9 (1.2 – 12.7
Cell phone	13(12.5)	6(17.1)	4(18.2)	13.0 (6.6 – 19.5)
Landline telephone	4(3.9)	5(14.3)	2(9.1)	7.4 (2.3 – 12.5)
Internet	14(13.5)	2(5.7)	1(4.6)	11.4 (5.9 – 16.8)
Printed newspaper	1(1.0)	0	0	0.5 (0.0 – 1.5)
Word of mouth	6(5.8)	1(2.9)	0	3.6 (1.2 – 12.7)
Child's school	1(1.0)	0	0	0.5 (0.0 – 1.5)
Ham radio	3(2.9)	0	1(4.6)	1.9 (0.1 – 3.7)
Other	2(1.9)	0	1(4.6)	1.9 (0.0 – 4.7)
Households with communication barriers				
Hearing problems	7(6.7)	12(34.3)	12(54.6)	17.7 (10.9 – 24.6)
Vision problems	9(8.7)	2(5.7)	6(27.3)	9.6 (3.7 – 15.5)
Hearing and vision problems	2(2.9)	2(5.7)	6(27.3)	
Problems understanding written material	7(6.7)	3(8.6)	2(9.1)	7.8 (2.2 – 13.4)
Problems understanding English	6(5.8)	1(2.9)	0	4.2 (0.7 – 7.6)
Other	3(2.9)	0	2(9.1)	3.0 (0.1 – 5.8)
No barriers	82(78.9)	22(62.9)	12(54.6)	71.6 (62.5 – 80.6)

Table 3: Communication preferences of households with individuals with vision problems, hearing problems, or trouble understanding English, Lake County, California.

	Hearing Problems (n = 31)	Vision Problems (n = 17)	Literacy Problems (n = 12)	English Language Problems (n = 7)	CASPER Weighted % (95% CI)
Preferred method of receiving information					
Television	10(32.3)	5(29.4)	5(41.7)	1(14.3)	32.9 (24.9 – 40.9)
AM/FM Radio	7(22.6)	3(17.7)	1(8.3)	1(14.3)	19.0 (9.4 – 28.5)
Text message	0	2(11.8)	3(25.0)	1(14.3)	6.9 (1.2 – 12.7
Cell phone	6(19.4)	3(17.7)	2(16.7)	3(42.7)	13.0 (6.6 – 19.5)
Landline telephone	6(19.4)	2(11.8)	0	0	7.4 (2.3 – 12.5)
Internet	0	1(5.9)	0	0	11.4 (5.9 – 16.8)
Printed newspaper	0	0	0	1(14.3)	0.5 (0.0 – 1.5)
Word of mouth	1(3.2)	0	0	0	3.6 (1.2 – 12.7)
Child's school	0	0	0	0	0.5 (0.0 – 1.5)
Ham radio	1(3.2)	1(5.9)	1(8.3)	0	1.9 (0.1 – 3.7)
Other	0	0	0	0	1.9 (0.0 – 4.7)

Table 4. Questionnaire response rates for CASPER conducted in Lake County, California.

Questionnaire response	SV Percent (n=14)	LC CASPER Percent (n=161)	SV Rate	LC CASPER Rate
Completion[*]	100	76.7	14/14	161/210
Cooperation†	67	61.7	14/21	161/261
Contact‡	35	31.3	14/40	161/514

*Percent of surveys completed in relation to the goal of 14
†Percent of contacted households that were eligible and willing to participate in the survey
‡Percent of randomly selected households that completed an interview

Table 5. Demographics and home characteristics for interviewed households in Spring Valley and Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % of households
Household size				
1	2	42	14.3	24.6 (16.0 – 33.1)
2 to 4	9	103	64.3	66.3 (57.2 – 75.3)
5 or more	3	15	21.4	8.7 (3.3 – 14.0)
Missing	0	1	0	0.5 (0 – 1.5)
Households with vulnerable age groups				
<2 years old	0	13	0.0	8.4 (3.1 – 13.7)
≥65 years old	7	57	50.0	34.3 (24.6 – 44.0)
Main language spoken				
English	14	153	100.0	95.0 (91.3 – 98.7)
Spanish	0	8	0.0	5.0 (1.3 – 8.7)
Home type				
Mobile home	0	41	0.0	27.6 (17.5 – 37.8)
Single family home	13	114	92.9	69.3 (59.4 – 79.1)
Duplex	0	5	0	2.7 (0.4 – 4.9)
Multi-units complex	1	1	7.1	0.5 (0 – 1.5)
Year built (Home)				
2010 or later	0	0	0	0
2000 to 2009	5	18	35.7	13.0 (4.8 – 21.3)
1990 to 1999	1	16	7.1	8.3 (1,7 – 14.9)
1980 to 1989	3	24	21.4	14.5 (8.1 – 20.9)
Before 1980	4	67	28.6	44.0 (31.9 – 56.1)
DK	1	31	7.1	17.7 (9.3 – 26.6)
Home foundation				
Slab-on-grade	5	55	35.7	34.6 (23.7 – 45.5)
Basement	0	5	0	2.4 (0.4 – 4.4)
Crawl space	9	69	64.3	44.2 (33.3 –55.0)

Table 6. Perceptions and experiences regarding geothermal venting for interviewed households in Spring Valley and Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Geothermal gasses				
Aware of geothermal gasses	10	109	71.4	67.7 (58.6 – 76.9)
Had at least one concern about potential effects*	5	58	35.7	32.4 (23.7 – 41.1)
Concerned about effects on health of family	3	55	21.4	30.8 (22.1 – 39.5)
Concerned about effects on health of pets/livestock	3	38	21.4	22.4 (14.8 – 30.1)
Concerned about effects on property	3	33	21.4	19.7 (12.3 – 27.2)
No concerns about effects of gasses	9	97	64.3	64.5 (54.8 – 74.2)
Radon				
Aware of health effects of radon	5	85	35.7	52.4 (41.5 – 63.3)
Home have been tested for radon	0	16	0.0	10.6 (4.9 – 16.3)
Aware of health effects and tested	0	15	0.0	10.1 (4.3 – 15.9)
Experiences in or around home				
Have had at least one experience with geothermal venting in or around home†	5	33	35.7	21.0 (12.2 – 29.8)
Noticed rotten egg smell	4	23	28.6	16.1 (7.4 – 24.7)
Encountered unexpected flames	0	1	0.0	0.4 (0 – 1,4)
Seen unusual corrosion on metal surfaces	1	11	7.1	6.1 (1.7 – 10.5)
Seen bubbling in puddles	1	5	7.1	3.1 (0.2 – 6.0)
Seen blue-green algae in nearby lake	14	128	100	78.9 (67.9 – 90.0)

*Any household that reported concerns about effects on health of family, health of pets/livestock, or concern about effects on property.

†Any household that reported that they have noticed rotten egg smell, encountered unexpected flames, seen unusual corrosion on metal surfaces, or seen bubbling in puddles.

Table 7. Evidence of geothermal venting outside home for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=13)*	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Had at least one evidence of geothermal venting outside home*	0	4	0.0	3.1 (0 – 7.8)
Signs of corrosion on metal surfaces				
Corrosion seen on metal surfaces	0	4	0.0	3.1 (0 – 7.8)
No visible corrosion seen	13	13	0.0	10.3 (1.9 – 18.8)
No metal surfaces outside home	0	6	0.0	5.3 (0 – 12.5)
Rotten egg smell outside home	0	0	0.0	0 (0)
Bubbling in puddles				
Bubbling seen in puddles	0	0	0.0	0 (0)
No bubbling seen in puddles*	13	49	100.0	35.3 (20.0 – 50.6)
No puddles outside home	0	109	0.0	62.8 (47.4 – 78.1)

*One interview conducted by telephone—no observations made.

**Any household where the interview teams noted signs of corrosion on metal surfaces, rotten egg smell, or bubbling in puddles outside home.

***Spring Valley survey was conducted on rainy day—puddles seen outside of all homes.

Table 8. Perceived greatest emergency or disaster threats for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Accidental chemical releases	1	25	7.1	17.1 (8.9 – 25.2)
Earthquakes	11	101	78.6	64.0 (53.2 – 74.8)
Floods	1	67	7.1	42.2 (29.6 – 54.8)
Heat waves	3	24	21.4	15.9 (10.1 – 21.7)
Terrorist attacks	1	10	7.1	5.4 (1.9 – 9.0)
Tornadoes	0	5	0	3.0 (0.2 – 5.8)
Volcanic eruptions	2	40	14.3	23.2 (15.5 – 30.9)
Wild fires	12	103	85.7	65.6 (55.0 – 76.3)
Winter storms	4	65	28.6	38.6 (28.3 – 48.9)
Other	4	18	28.6	10.6 (4.1 – 17.0)

Table 9. Experiences with earthquakes for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Experienced earthquakes or tremors while living in this neighborhood	9	98	64.3	65.9 (56.2 – 76.0)
Had been affected by earthquakes in the past*	6	36	42.9	20.0 (13.7 – 26.3)
Finances	2	6	14.3	2.9 (0.7 – 5.2)
Property	2	11	14.3	5.4 (2.4 – 8.4)
Peace of mind	4	27	28.6	14.9 (9.5 – 20.4)
Health	0	3	0.0	2.4 (0.0 – 5.3)
Other	0	3	0.0	1.5 (0.0 – 3.7)
No effects	8	119	57.1	76.4 (69.9 – 82.9)

* Any household that reported having had their finances, property, peace of mind or health affected by earthquakes in the past.

Table 10. Communication during an emergency or disaster for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Preferred method of receiving information				
Television	4	55	28.6	32.9 (24.9 – 40.9)
AM/FM Radio	1	28	7.1	19.0 (9.4 – 28.5)
Text message	0	9	0.0	6.9 (1.2 – 12.7
Cell phone	0	23	0.0	13.0 (6.6 – 19.5)
Landline telephone	5	11	35.7	7.4 (2.3 – 12.5)
Internet	1	17	7.1	11.4 (5.9 – 16.8)
Printed newspaper	0	1	0.0	0.5 (0.0 – 1.5)
Word of mouth	1	7	7.1	3.6 (1.2 – 12.7)
Church/community center	1	0	7.1	0
Bulletin board	0	0	0.0	0
Child's school	0	1	0.0	0.5 (0.0 – 1.5)
Ham radio	0	4	0.0	1.9 (0.1 – 3.7)
Work	0	0	0.0	0
Other (siren)	1	3	7.1	1.9 (0.0 – 4.7)
Households with at least one communication barriers*	47	47	35.7	27 (18.2 – 35.8)
Hearing problems	4	31	28.6	17.7 (10.9 – 24.6)
Vision problems	2	17	14.3	9.6 (3.7 – 15.5)
Problems understanding written material	1	12	7.1	7.8 (2.2 – 13.4)
Problems understanding English	0	7	0.0	4.2 (0.7 – 7.6)
Other	0	5	0.0	3.0 (0.1 – 5.8)
No barriers	9	111	64.3	71.6 (62.5 – 80.6)

*Any household that reported someone in the household with a hearing problem, vision problem, problem understanding written material, or problem understanding English.

Table 11. Action taken to prepare for an emergency or disaster for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Actions taken				
Have taken at least 1 action*	14	159	100.0	99.0 (97.5 – 100)
Have taken at least 3 actions*	14	149	100.0	93.6 (89.8 – 97.4)
Have taken 5 or more actions*	14	140	100.0	88.7 (83.5 – 93.8)
Learned to shut off utilities	13	128	92.9	82.5 (74.9 – 90.0)
Learned what supplies to have on hand	13	138	92.9	86.8 (81.1 – 92.5)
Made family disaster plans	7	79	50.0	48.0 (37.5 – 58.4)
Participated in neighborhood emergency or disaster planning	4	17	28.6	12.1 (3.7 – 20.5)
Made disaster plans for pets	12	57	85.7	36.0 (25.5 – 46.6)
Made disaster plans for livestock	1	5	7.1	3.2 (0.3 – 6.2)
Learned first aid	13	131	92.9	82.0 (75.2 – 88.8)
Learned how to be safe during an earthquake	14	147	100.0	91.3 (85.6 – 97.1)
Learned how to make home contents safe during an earthquake	11	129	78.6	82.2 (76.9 – 87.5)
Learned how to make building structure safer during an earthquake	8	94	57.1	61.4 (51.9 – 71.0)
Stored hazardous materials safely	11	133	78.6	84.7 (77.7 – 91.6)
Learned how to safeguard finances	12	97	85.7	59.6 (48.9 – 70.4)
Purchased earthquake insurance for home	1	25	7.1	15.2 (8.4 – 22.1)
Purchased earthquake insurance for home contents	1	24	7.1	15.7 (9.0 – 22.4)

*Actions as listed in the table.

Table 12. Emergency supplies for an emergency or disaster for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Numbers of days of supplies currently in home				
1 to 3 days	0	23	0.0	15.2 (8.7 – 21.7)
4 to 6 days	3	22	21.4	11.2 (5.7 – 16.8)
7 to 9 days	2	34	14.3	21.2 (13.3 – 29.1)
10 days or more	9	80	64.3	51.3 (41.9 – 60.7)
Supplies set aside for emergency/disaster				
Had at least 1 item set aside*	14	157	100.0	98.0 (94.9 – 100)
Had at least 3 items set aside*	14	153	100.0	96.1 (92.7 – 99.6)
Had 5 or more items set aside*	14	141	100.0	88.9 (83.5 – 94.4)
3-day supply for non-perishable food	14	136	100.0	85.0 (78.6 – 91.3)
3-day supply of water	10	102	71.4	66.0 (56.8 – 76.6)
Battery-operated radio	9	108	64.3	66.7 (56.8 – 76.6)
First-aid kit	12	130	85.7	80.2 (72.2 – 88.2)
3-day supply of prescription medication	12	117	85.7	71.2 (61.2 – 81.2)
Special medical equipment or supplies	4	58	28.6	32.3 (23.4 – 41.2)
Flashlights with extra batteries	12	137	85.7	86.7 (79.8 – 93.6)
Dust masks	8	80	57.1	50.9 (40.7 – 61.1)
Eye glasses	12	104	85.7	67.3 (57.0 – 77.7)
Important financial documents	13	113	92.9	71.0 (61.8 – 80.1)
Cash	11	82	78.6	54.8 (44.5 – 65.2)
Copies of personal identification	13	110	92.9	69.8 (60.8 – 78.8)
Other	7	30	50.0	17.3 (8.6 – 25.9)
Generator	4	11	28.6	5.8 (0 – 11.6)
Guns/Ammo	0	3	0.0	1.8 (0 – 3.9)
Clothing/Blankets	0	6	0.0	3.6 (0.3 – 6.8)
No supplies set aside	0	3	0.0	1.4 (0 – 4.4)

*Items as listed in the table.

Table 13. Reasons for not preparing for an emergency or disaster for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Don't know what to do	1	25	7.1	14.0 (7.7 – 20.3)
Haven't had the time	1	23	7.1	14.0 (8.0 – 20.0)
Don't want to think about it	1	33	7.1	19.6 (13.2 – 26.1)
It costs too much	0	42	0.0	23.0 (13.9 – 32.2)
Don't think it will make a difference	0	19	0.0	11.8 (6.2 – 17.3)
Don't think will be able to	0	19	0.0	12.0 (5.6 – 18.3)
Think that emergency responders will help	2	60	14.3	36.9 (26.5 – 47.3)
Other reasons	1	16	7.1	11.7 (4.9 – 18.4)
None of these reasons	10	22	71.4	13.4 (6.5 – 20.9)

Table 14. Confidence in the County's public health system to respond and protect the community for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Very confident	0	23	0.0	15.4 (6.9 – 24.0)
Somewhat confident	7	68	53.9	39.7 (28.7 – 50.7)
Not too confident	4	34	30.8	23.9 (14.9 – 32.8)
Not at all confident	1	22	7.7	12.6 (6.9 – 18.3)
Don't know	1	13	7.7	7.9 (3.2 – 12.6)

Table 15. Assistance expected in the first 72 hours following a disaster for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Household members				
Expected to rely on*	12	137	85.7	85.5 (80.0 – 90.9)
Expected to rely on a great deal†	11	119	78.6	73.4 (66.7 – 80.2)
People in your neighborhood				
Expected to rely on*	14	131	100.0	79.4 (70.7 – 88.2)
Expected to rely on a great deal†	4	44	28.6	24.1 (16.4 – 31.7)
Non-profit organizations				
Expected to rely on*	10	109	71.4	68.3 (58.3 – 78.3)
Expected to rely on a great deal†	3	27	21.4	16.1 (9.1 – 23.1)
Faith community				
Expected to rely on*	4	81	28.6	46.4 (37.4 – 55.3)
Expected to rely on a great deal†	2	28	14.3	17.3 (11.0 – 23.6)
Fire, police, emergency personnel				
Expected to rely on*	14	136	100	81.6 (72.7 – 90.4)
Expected to rely on a great deal†	9	49	64.3	32.7 (23.2 – 42.3)
County, State or Federal Government				
Expected to rely on*	11	100	78.6	63.4 (53.2 – 73.6)
Expected to rely on a great deal†	3	17	21.4	13.1 (5.4 – 20.8)

*Any household that reported a score of 2, 3, 4, or 5 to the corresponding question.
†Any household that reported a score of 5 to the corresponding question.

Table 16a. Response to mandatory evacuation and shelter locations for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Likely response to mandatory evacuation				
Will evacuate	9	137	85.1	85.4 (79.8 – 91.1)
Will not evacuate	3	16	9.9	9.3 (4.0 – 14.4)
Don't know if will evacuate	2	7	4.3	4.7 (0.8 – 8.7)
Reasons preventing evacuation				
Had at least 1 reason that may prevent evacuation*	9	90	55.9	54.4 (46.0 – 62.9)
Had 3 or more reasons that may prevent evacuation*	5	36	22.4	20.0 (12.9 – 27.1)
Had 5 or more reasons that may prevent evacuation*	1	13	8.1	7.9 (2.6 – 13.2)
Will evacuate no matter what	6	78	48.4	49.2 (40.2 – 58.3)
Lack of transportation	0	30	18.6	16.8 (9.9 – 23.6)
Lack of trust in public officials	2	24	14.9	14.2 (7.3 – 21.1)
Concern about leaving property	8	28	17.4	16.8 (10.0 – 23.6)
Concern about getting gas for vehicle	0	25	15.5	14.1 (8.0 – 20.2)
Nowhere to go	0	15	9.3	9.0 (3.6 – 14.3)
Concern about personal safety	2	22	13.7	16.1 (8.1 – 24.0)
Concern about leaving livestock or pets	2	20	12.4	13.8 (5.9 – 21.8)
Inconvenient	7	11	6.8	6.2 (2.3 – 10.1)
Expensive	2	17	10.6	10.2 (4.2 – 16.1)
Health problems	0	16	9.9	8.4 (4.0 – 12.9)
Other	3	16	9.9	9.3 (4.6 – 14.1)

*Reasons as listed in the table.

Table 16b. Response to mandatory evacuation and shelter locations for interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Shelter locations				
Friends/ family/ second home	7	105	50.0	68.0 (59.9 – 76.1)
Hotel or motel	4	16	28.6	8.1 (4.0 – 12.2)
American Red Cross/ church/ community shelter	0	19	0.0	10.2 (5.1 – 15.2)
Would not evacuate	2	4	14.3	3.3 (0 – 7.4)
Other (Campground)	1	12	7.1	6.7 (2.5 – 10.9)
Don't know	0	4	0.0	3.2 (0 – 6.9)

Table 17. Pet ownership and pet evacuation of interviewed households in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Pet ownership and pet evacuation				
Own pets	12	126	85.7	82.6 (75.9 – 89.3)
Own livestock	0	4	0.0	5.4 (0.0 – 12.6)
Own pets and/or livestock	12	130	85.7	85.0 (77.8 – 91.2)
Take pets/livestocks with them*	11	111	91.2	87.6 (82.0 – 93.1)
Find a safe place for them*	0	3	0.0	1.9 (0.0 – 4.2)
Leave behind with food/ water*	0	9	0.0	5.9 (2.1 – 9.7)
Would not evacuate because of pet*	0	3	0.0	2.2 (0.0 – 4.8)
Would not evacuate because of livestock*	0	0	0.0	0.0 (0.0 – 0.0)
Would not evacuate for other reasons*	1	2	8.3	1.2 (0.0 – 3.0)

*Of those who have pets and/or livestock.

Table 18. Main source of home water supply in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Town, city or county water system	4	121	28.6	
Small water system operated by property owner/ homeowner association	10	14	71.4	6.7 (0.4 – 12.9)
Private well	0	18	0.0	14.0 (3.0 – 25.1)
Other	0	3	0.0	1.7 (0.0 – 3.7)
Don't know	0	4	0.0	1.9 (0.1 – 3.7)

Table 19. Home drinking water and private well characteristics of households that drink private well water in Spring Valley, Lake County, California.

	SV Frequency (n=14)	LC CASPER Frequency (n=161)	SV % of households	LC CASPER Weighted % (95% CI)
Home drinking water				
Private well water	0	18	0.0	10.2 (2.5 – 17.9)
Only drank private well water	0	10	0.0	6.0 (0.0 – 12.5)
Tap/faucet water	5	100	35.7	56.9 (44.7 – 69.2)
Bottled water	13	93	92.9	59.8 (48.7 – 70.9)
Lake water collected by household	0	0	0.0	0.0 (0.0 – 0.0)
Other	1	21	7.1	12.8 (4.1 – 21.4)

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