



Aliso Canyon Disaster
Health Research Study



Aliso Canyon Disaster Community Opinion Online Survey

March 2021

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Background and Objectives

On October 23, 2015, the largest gas blowout in the history of the United States began at the Southern California Gas (SoCal Gas) Company's Aliso Canyon gas storage facility. An estimated total of 109,000 metric tons of methane flowed uncontrolled from Aliso Canyon Well SS-25. After seven failed attempts, the blowout was stopped on February 12 and the well was sealed on February 15, 2016.

In nearby communities, residents experienced foul odors, oily mists, and a range of health symptoms presumed to have been caused in part by natural gas sulfur odorants. The Los Angeles County Department of Public Health (Public Health) directed the temporary relocation of over 8,000 households in an effort to offer residents relief from odors and symptoms. After Well SS-25 was sealed and outdoor air contaminants returned to background levels, symptoms persisted, and residents expressed concerns about long-term health impacts. For this reason, Public Health identified the need for a health study.

On August 8, 2018, California Attorney General Xavier Becerra, along with the California Air Resources Board, Los Angeles City Attorney Mike Feuer, and the County of Los Angeles secured a \$119.5 million settlement with Southern California Gas Company over the disaster. As part of this settlement, \$25 million was secured for a long-term study of health impacts in communities affected by the Aliso Canyon blowout.

In September 2020, Probolsky Research, an independent research firm, first conducted a live-interviewer and online (multi-mode) survey among randomly selected residents who live in a geographic sub-set of Los Angeles County neighboring the Aliso Canyon gas storage facility. The community opinion survey was conducted to gain a broader understanding of community concerns, perceptions, and attitudes regarding the Aliso Canyon blowout and impacts on health and community priorities for the Aliso Canyon Disaster Health Research Study to inform the Study goals. The multimode survey report can be found on the Aliso Canyon Disaster Health Research Study website.

After the conclusion of the community opinion multimode survey, members of the Aliso Canyon Disaster Health Research Study's Community Advisory Group (CAG) requested an additional opportunity for community members to respond to the survey as many people who were affected by the gas leak did not participate in the first survey. In response, Probolsky Research launched an online survey that was open to anyone who wished to participate. The purpose of this second community opinion survey is consistent with the first and is reflective of those most interested in the Aliso Canyon Disaster Health Research Study.

Methods

From Wednesday, September 23, 2020 to Thursday, December 3, 2020, [Probolsky Research](#), conducted an online survey among residents who self-reported the location of their primary residence. A total of 346 residents were surveyed. The survey was offered in English and respondents were able to respond using their computer, tablet, or smart phone. Respondents were invited to participate via Aliso Canyon disaster-specific Facebook groups and by their neighbors, including the members of the CAG. Due to the targeted nature of the survey respondent recruitment, the results of the survey cannot be generalized to represent the attitudes, opinions, and concerns of the broader population that was impacted by the Aliso Canyon blowout.

The survey questions were developed with input from the Los Angeles County Department of Public Health and Aliso Canyon Disaster Health Research Study CAG members. The survey was available to any interested member of the public.

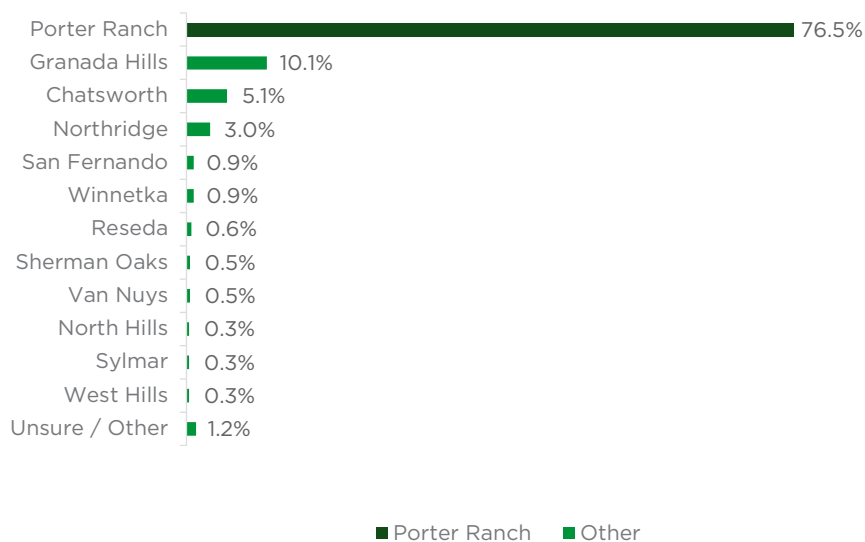
Sample Demographics and Characteristics

Of the 347 survey respondents, 33% identified their gender as male and 67% as female. The survey sample consisted primarily of White/Caucasian (72%) respondents with the remainder identifying as Asian (13%), Latino/Hispanic (6%) or other (7%). Survey respondents were mostly middle-aged or older adults: 18-24 (0.3%), 25-34 (3%), 35-44 (12%), 45-54 (21%), 55-64 (27%), 65+ (37%). Almost three-quarters of the respondents had a bachelor's degree (37%) or postgraduate education (36%), and over two-thirds had a household income of \$75,000-\$99,999 (12%) or \$100,000 or more (56%).

Although the survey was open to any interested member of the public, most respondents reported living in Porter Ranch (76%) and Granada Hills (10%) – neighborhoods closest to the natural gas storage facility. The remainder lived in Chatsworth (5%), Northridge, San Fernando, Winnetka, Reseda, Sherman Oaks, Van Nuys, North Hills, Sylmar, and West Hills. More than half of the survey respondents (55%) were relocated during the gas blowout.

Both location of primary residence during the Aliso Canyon blowout and awareness of the blowout were identified by the CAG as important factors that could offer a more in-depth understanding of the survey results. Therefore, in addition to presenting the overall results for all respondents combined, results are broken down by location (Porter Ranch, other) and awareness (aware, unaware). Due to the small fraction of respondents from neighborhoods other than Porter Ranch, results are broken down into two locations: Porter Ranch and other neighborhoods combined.

Primary Residence During the Aliso Canyon Blowout

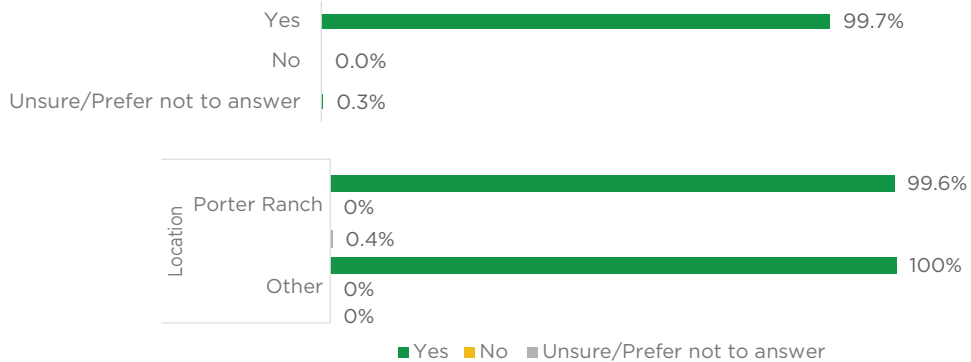


Results

Awareness of the Aliso Canyon Blowout

Q: Are you aware of the Aliso Canyon Blowout that happened over the course of four months from October 2015 to February 2016?

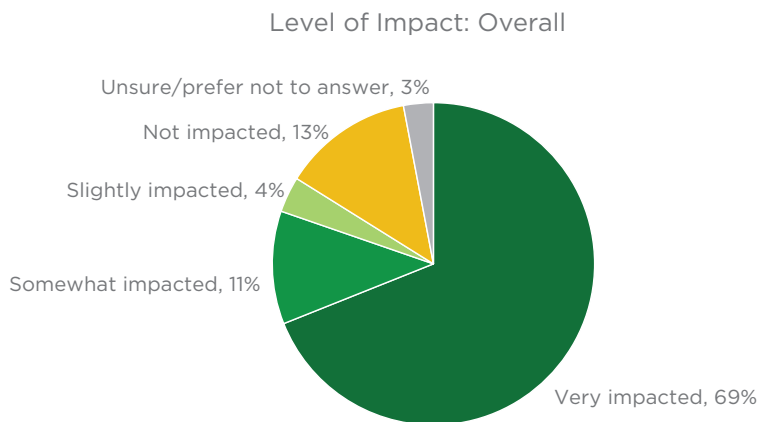
Awareness of the Aliso Canyon Blowout: Overall and by Location

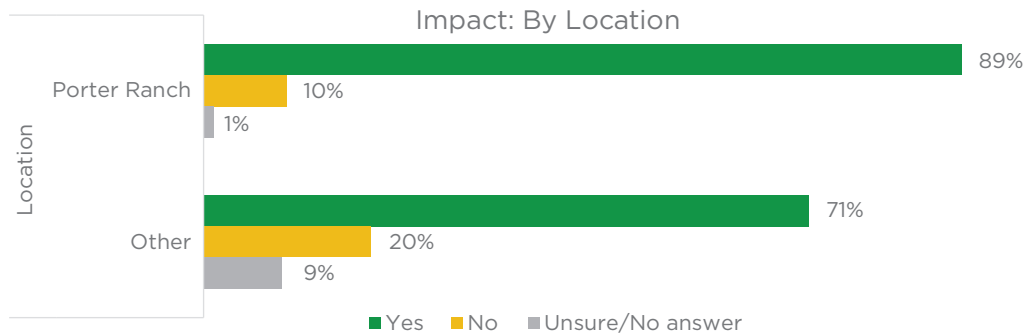


*As the above results indicate, nearly all survey respondents were aware of the Aliso Canyon Blowout. As such, while the following results will continue to be broken down by location, they will not be broken down by level of awareness.

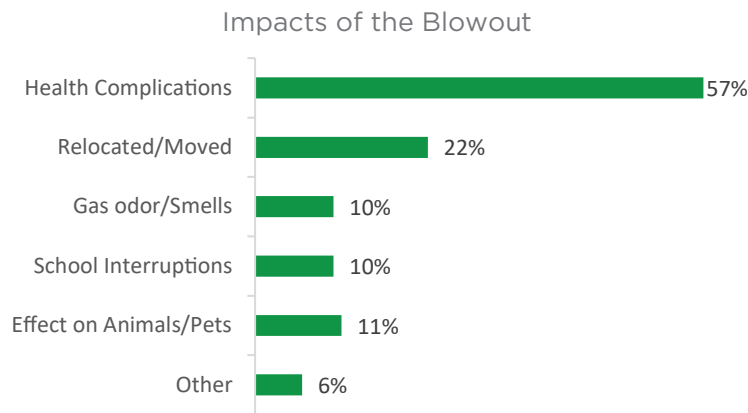
Impacts of the Aliso Canyon Blowout and Gas Storage Facility

Q: Would you say that your daily life in your household was impacted by the Aliso Canyon gas blowout? And would you say that you were very, somewhat, or slightly impacted by the Aliso Canyon gas blowout?





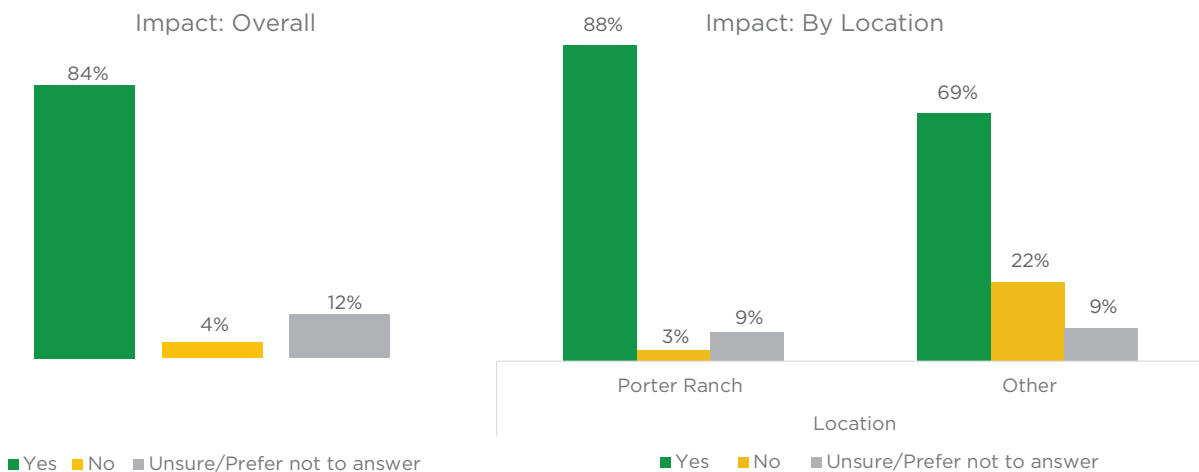
Q: Please describe how you and/or people in your household were impacted by the Aliso Canyon gas blowout. Respondents provided the answers below. **[The following percentages reflect a subset of respondents (84%, n=290) who responded "Yes" to the previous question.]**



"We were impacted physically, emotionally, and spiritually. To the extent we had to sell our house and move away."



Q: Has your community as a whole been impacted by the Aliso Canyon gas blowout or Natural Gas Storage Facility?

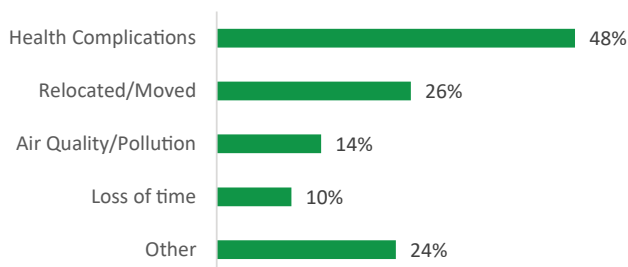


Q: How has your community as a whole been impacted by the Aliso Canyon gas blowout or Natural Gas Storage Facility? Respondents provided the answers below. **[The following percentages reflect a subset of respondents (84%, n=290) who responded "Yes" to the previous question.]**

"We were unable to interface with our neighbors, and have them or our friends over for dinner or general get togethers. We were all concerned about going outside."



Types of Impacts Experienced

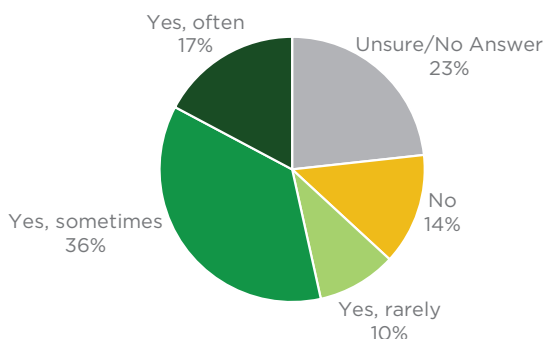


"I have moved out of the area, but the long term effects of this disaster are still with me. Everyone who was exposed to the gas may have future health problems that are related to it."

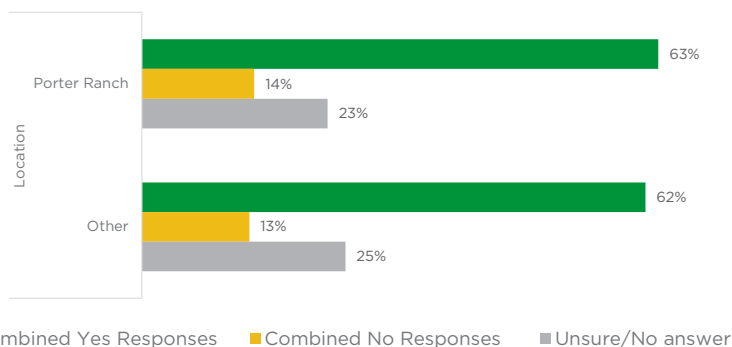


Q: Have you ever smelled gas-like odors outdoors at your home or in your neighborhood in the last year? If yes, how frequently?

Experience of Odors: Overall and Frequency



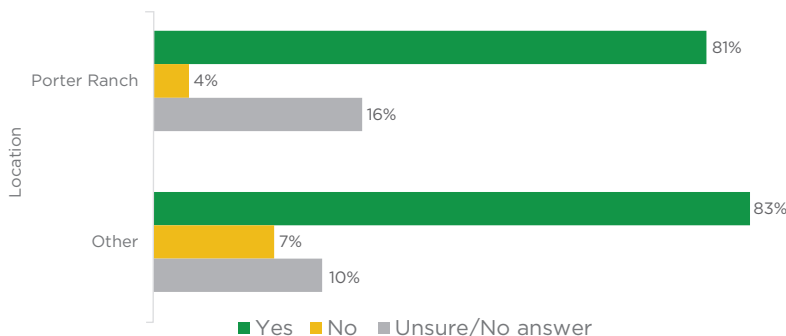
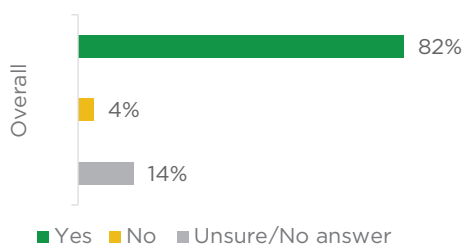
Experience of Odors: By Location



Q: Do you think there are any long-term health effects to people in your community that may be caused (or have already been caused) by the Aliso Canyon gas blowout or Natural Gas Storage Facility?

Perceived Long-Term Health Effects: By Location

Perceived Long-Term Health Effects: Overall



Q: What do you think the long-term health effects are or could be as a result of the Aliso Canyon gas blowout or Natural Gas Storage Facility? Respondents chose from the answers below. [The following percentages reflect a subset of respondents (82%, n=284) who responded "Yes" to the previous question.]

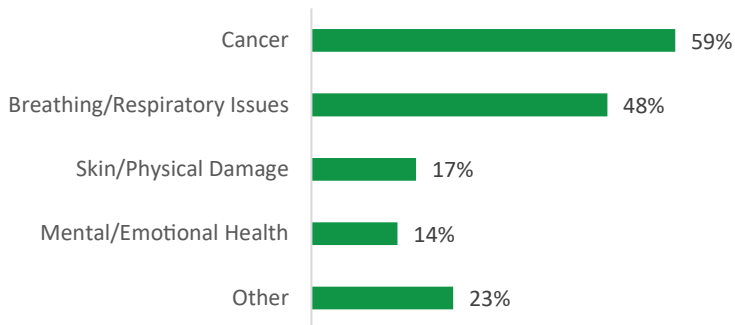
"I worry about respiratory effects, genetic effects, and reproduction issues for our children."



"Cancer, asthma, and other unknown illnesses. Depression and emotional issues over the impact of this exposure."



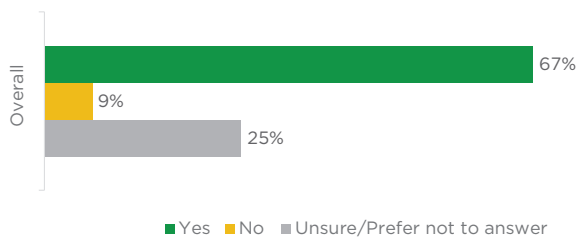
Perceived Long-term Health Effects



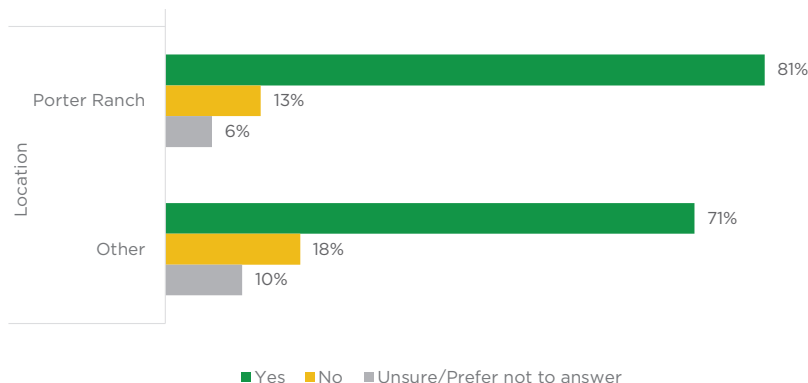
Health Symptoms

Q: Did you and/or anyone in your household experience physical health symptoms during and/or shortly after the October 2015 - February 2016 Aliso Canyon gas blowout?

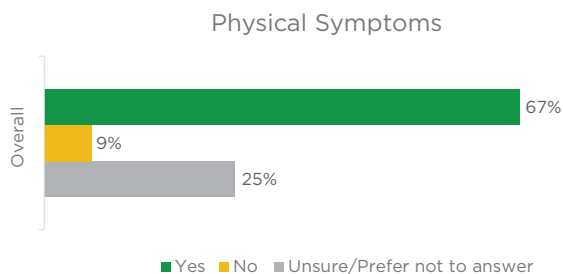
Physical Symptoms: Overall



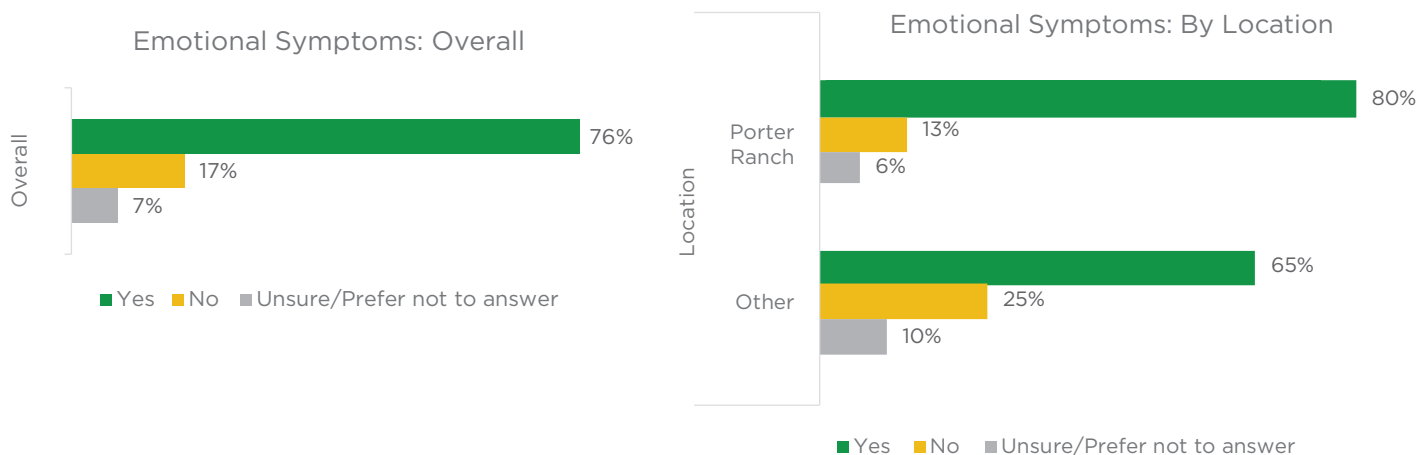
Physical Symptoms: By Location



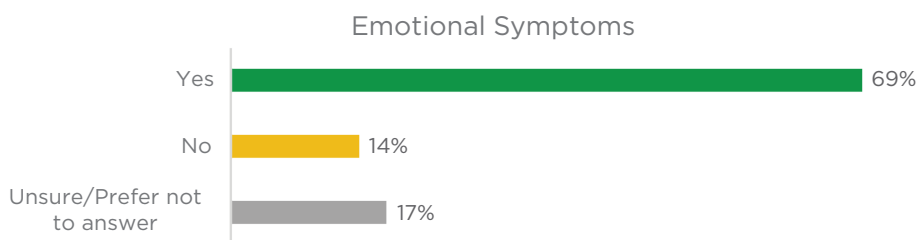
Q: Have you or anyone in your household experienced physical health symptoms in the last year that you believe are related to the Aliso Canyon gas blowout or Natural Gas Storage Facility? **[The following percentages reflect a subset of respondents (78%, n = 270) who responded "Yes" to the previous question.]**



Q: Did you or anyone in your household experience emotional health symptoms such as anger, anxiety, fear, or sadness during and/or shortly after the 2015-2016 Aliso Canyon gas blowout?

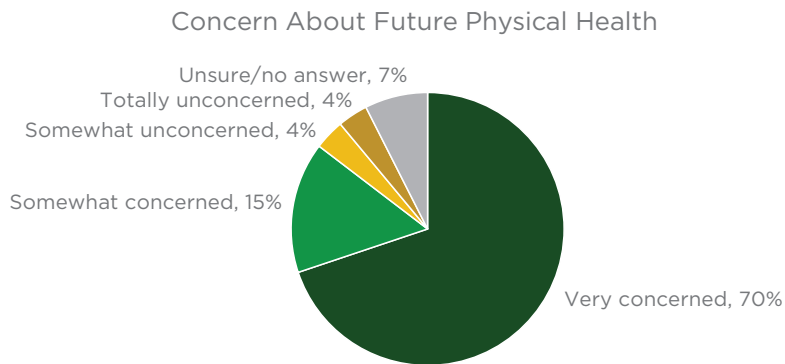


Q: Have you or anyone in your household experienced emotional health symptoms such as anger, anxiety, fear, or sadness in the last year that you believe are related to the Aliso Canyon blowout or Natural Gas Storage Facility? **[The following percentages reflect a subset Location of respondents who responded "Yes" to the previous question.]**

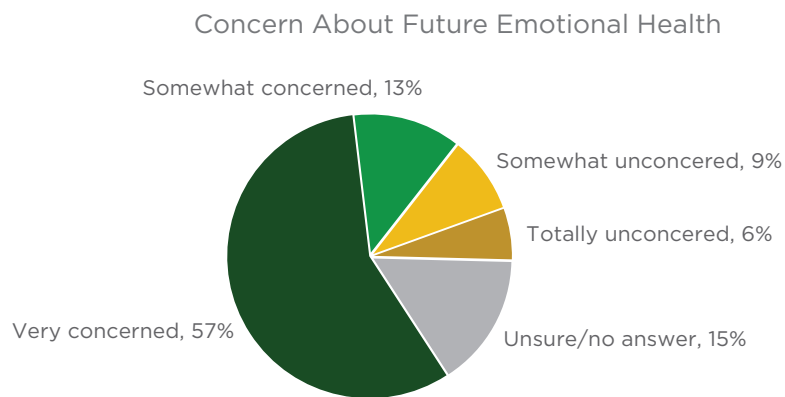


Concern about Future Health and Safety

Q: Are you concerned about the future physical health of yourself and/or someone in your household in relation to the Aliso Canyon gas blowout or Natural Gas Storage Facility?

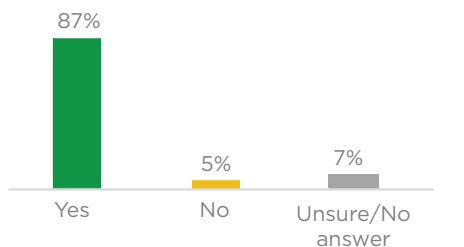


Q: Are you concerned about the future emotional health of yourself and/or someone in your household in relation to the Aliso Canyon gas blowout or Natural Gas Storage Facility?

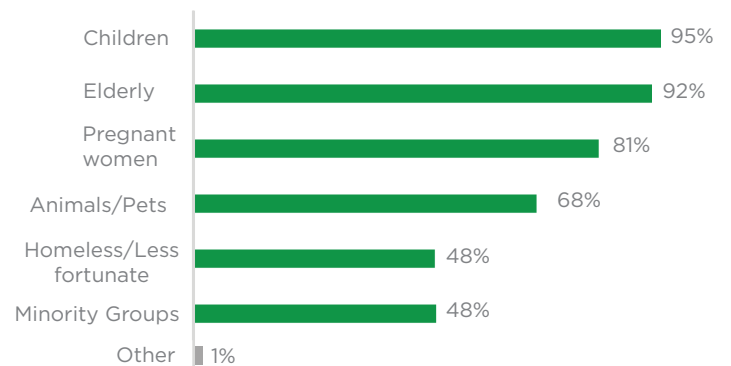


Q: Are you concerned about the future physical and emotional health of others in the community in relation to the Aliso Canyon gas blowout or Natural Gas Storage Facility? If yes, which community members are you concerned about? Respondents chose from the answers below.

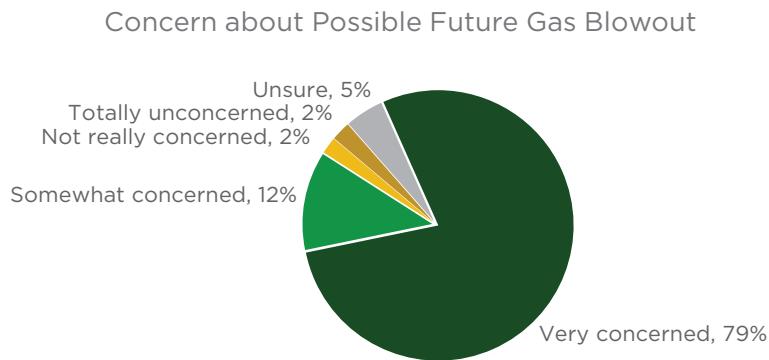
Concern about Health of Community Members



Community Groups of Concern

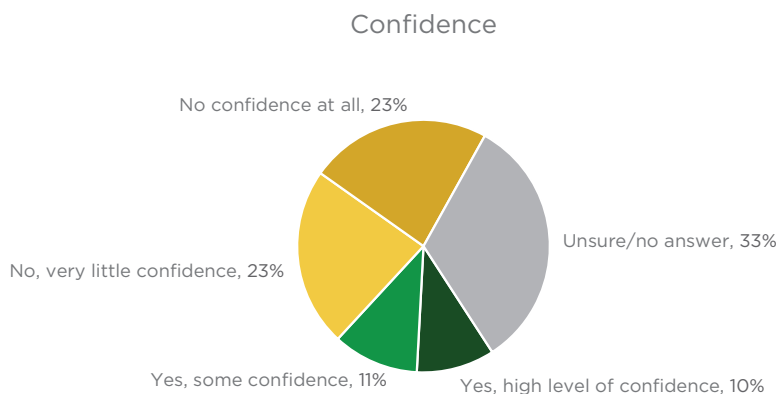


Q: Are you concerned that another gas blowout could occur in the future?

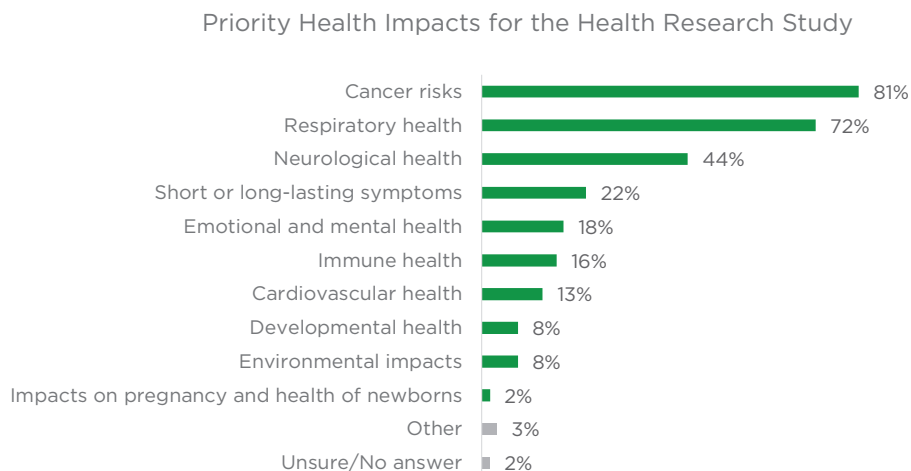


Aliso Canyon Disaster Health Research Study

Q: Do you have confidence that the LA County Department of Public Health can oversee a fair Health Research Study?

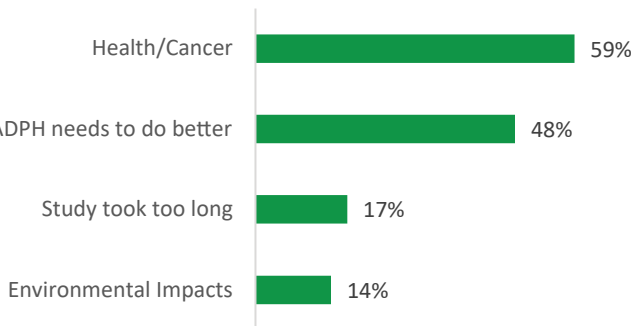


Q: What specific things about your family's short-term and long-term health would you like the Health Research Study to look at and prioritize? Respondents chose from the answers below.



Q: What, if anything, do you want the Health Study researchers to know about the Aliso Canyon gas blowout and your health or the health of other members of your household? Respondents provided the answers below.

What Respondents want the Health Study Researchers to Know

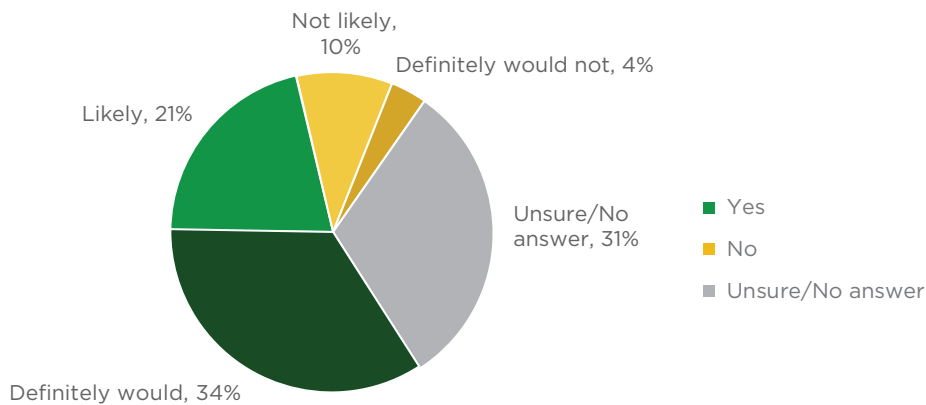


"I want them to know that this has been extremely stressful because of lack of info and transparency."

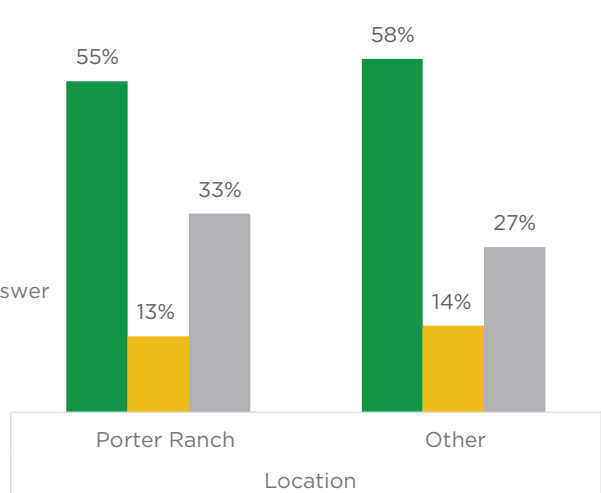


Q: Based on your current understanding of the Health Research Study, how likely would you be to participate in the study?

Participation Interest: Overall



Participation Interest: By Location



Conclusion

Results of the community opinion online survey show that respondents remain concerned about physical and emotional health due to the Aliso Canyon blowout and gas storage facility. Over two-thirds (67%) who reported physical symptoms during or shortly after the blowout also reported physical symptoms in the last year. The same was observed for emotional symptoms: over two-thirds (69%) of those who reported emotional symptoms during the blowout also reported symptoms in the last year. Respiratory illness and cancers are the top two health issues of concern and considered priorities for the Health Research Study.

The survey provides insight on how the blowout and gas storage facility affected daily life of households and possibly communities. The large majority (84%) of respondents felt that daily life in their household, and their community as a whole, were impacted by the Aliso Canyon gas blowout or natural gas storage facility. The most common effects that respondents reported were health complications (such as physical health symptoms including headaches, skin irritations, and nose bleeds, and respiratory symptoms including asthma), relocations, reduced air quality and the smell of gas odorants. Additionally, the vast majority of respondents (91%) expressed concern about the possibility of a future blowout.

Results of this survey and analysis should be interpreted in light of several limitations. For example, a significant amount of time has passed since the 2015-2016 blowout which could lead to errors in recall. Additionally, survey responses were self-reported which can introduce different types of bias, and survey respondents were self-selected and may not be representative of the broader population impacted by the Aliso Canyon blowout and natural gas storage facility. Furthermore, because the survey was only offered in English and electronically, non-English speakers and those who do not have regular access to web-based platforms or who are not familiar with using web-based platforms may be underrepresented.

In conclusion, the online community opinion survey results provide information on the experiences and concerns of those who reside near the gas storage facility, many of whom were directly impacted by the blowout disaster. The results will be used along with multiple other sources of information to help inform the planning of the Aliso Canyon Disaster Health Research Study. We appreciate the participation of the individuals who shared their experience with us and trust that the information they provided will be helpful to the scientific experts who are shaping the Study.