



Air Purifier Program Feedback Survey Report

Background

Communities in the South Bay area of San Diego County have been affected by transboundary flows of untreated sewage, trash, and sediment from the Tijuana River Valley. The untreated wastewater and sewage flows have caused increased levels of hydrogen sulfide (H₂S), a colorless gas with a pungent odor that resembles a “rotten egg” smell.

In response, the San Diego County Air Pollution Control District (SDAPCD) developed and implemented the Air Improvement Relief Effort (AIRE) Program to distribute air purifiers, which can help improve indoor air quality by reducing the odors caused by H₂S and other contaminants.

The Program is available to most households in the City of San Diego communities of Otay Mesa West, San Ysidro, Egger Highlands, Nestor, and Tijuana River Valley, as well as the City of Imperial Beach. Eligible residents can apply online by providing their name, address, and basic household information. Selected eligible households receive an air purifier and up to two replacement filters, with priority consideration given to households with children and individuals over 65 years of age, and those located closest to the Tijuana River Valley. To better understand how the program is working from participants’ perspectives, SDAPCD conducted an Air Purifier Feedback Survey. The survey was designed to document how residents use the air purifiers, their perceptions of the devices’ effectiveness in reducing odors and improving comfort, their overall satisfaction with the program and devices, and how their experiences relate to the broader conditions in the communities surrounding the Tijuana River Valley.

Methods

The Air Purifier Feedback Survey was sent to 4,752 households that had received an AIRE Program air purifier prior to July 31, 2025, based on the contact information provided in their AIRE applications. In total, 1,207 individuals completed the survey.

The survey was distributed on September 9, 2025, and closed on October 3, 2025, during which participants could complete the survey at their convenience. Survey links were distributed primarily via email and text-message when phone numbers were available. Participation was voluntary, and responses were collected in a way that protected confidentiality while still allowing for meaningful analysis.

The survey covered several aspects of the Program, with this report focusing on Questions 5, 8, 9, 12, 13. A complete list of all survey questions and data is available in the appendix of this report.

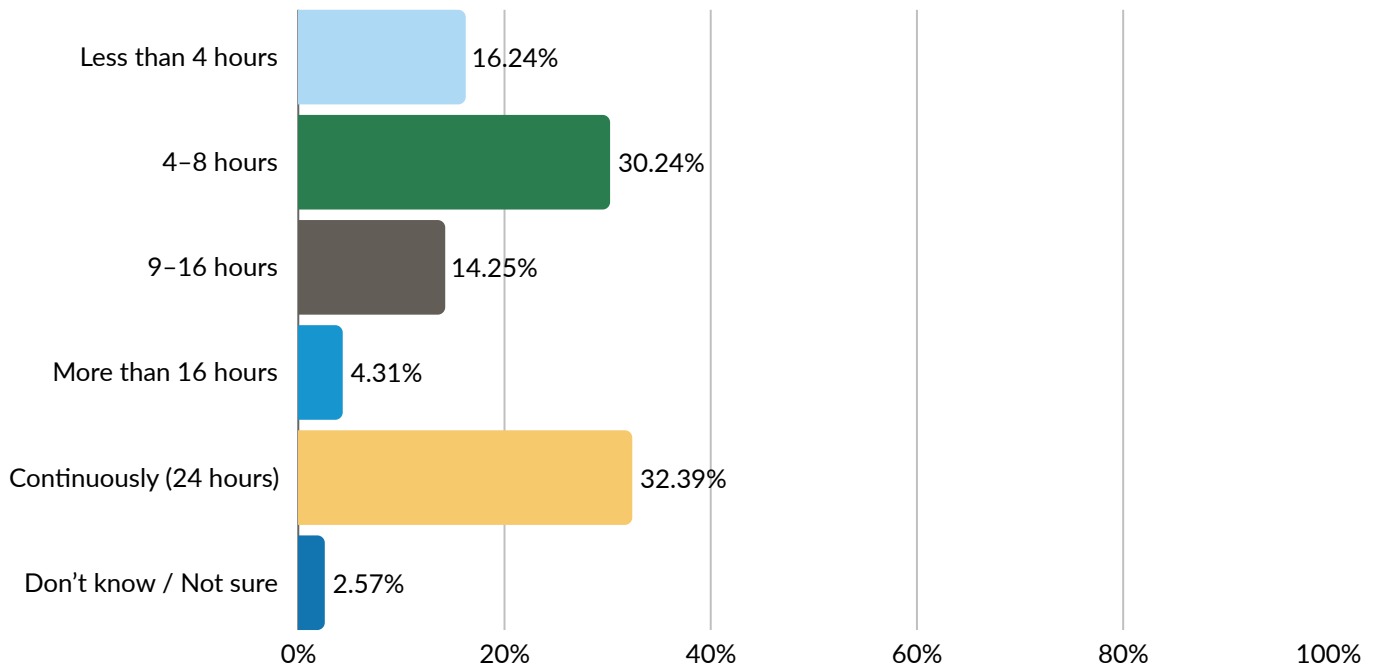
Question 5 asked about air purifier use, including how many hours per day participants typically ran the unit. Question 8 focused on perceived health impacts since beginning to use the purifier, such as changes in allergy or asthma symptoms, breathing comfort, coughing or throat irritation, headaches, eye irritation, and sleep quality. Additional questions assessed perceived changes in odors and indoor air quality, with an emphasis on sewage-related odors. Question 12 asked about the ease or difficulty of applying for and receiving the device, and Question 13 asked about overall satisfaction with the air purifier. Descriptive statistics were calculated for each survey question. For single-response questions, percentages were based on the number of respondents who answered that item. For “select all that apply” questions, percentages represent the proportion of all respondents who selected each option

and therefore sum to more than 100 percent. No statistical weighting was applied, so findings reflect the experience and perspectives of survey respondents rather than a weighted estimate of all AIRE participants. Therefore, the survey results may be influenced by expectations, recall, or varying levels of awareness about the program or the sewage crisis. Some duplicate contacts may have occurred, although this is not expected to affect the overall findings substantially.

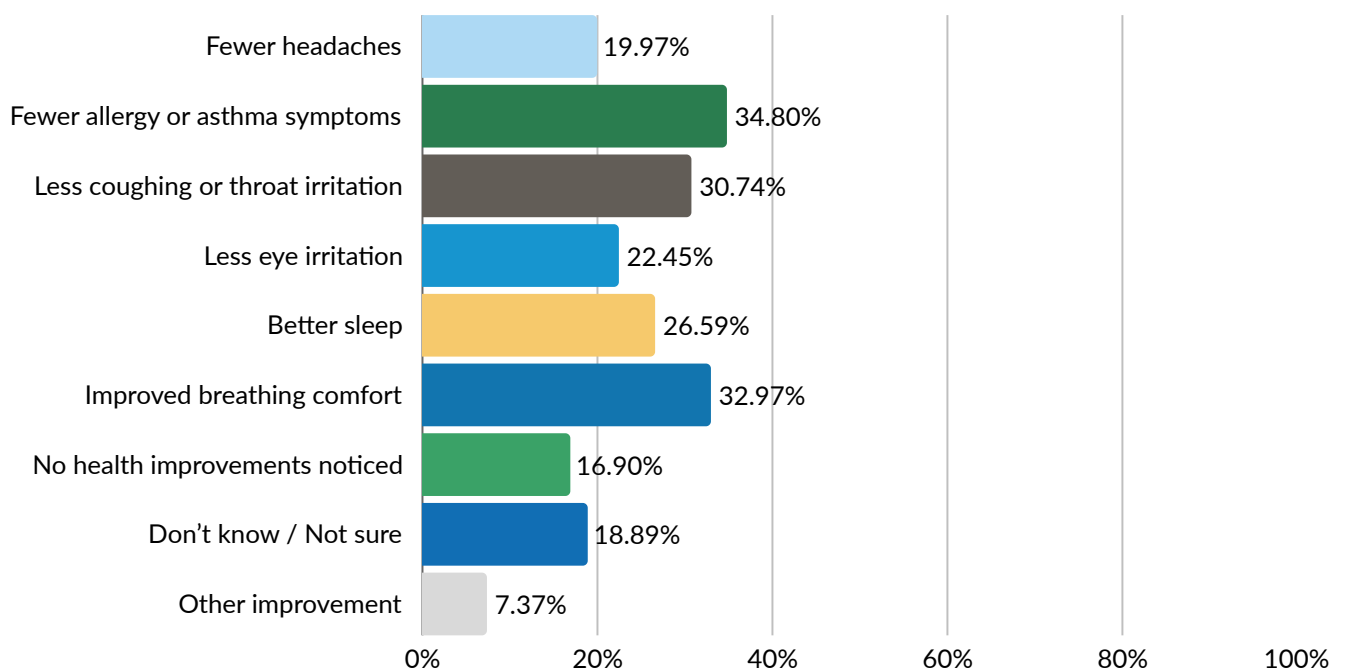
Results

The graphs below present the results related to purifier usage, perceived health improvements, the application and delivery process, and overall satisfaction with the air purifiers.

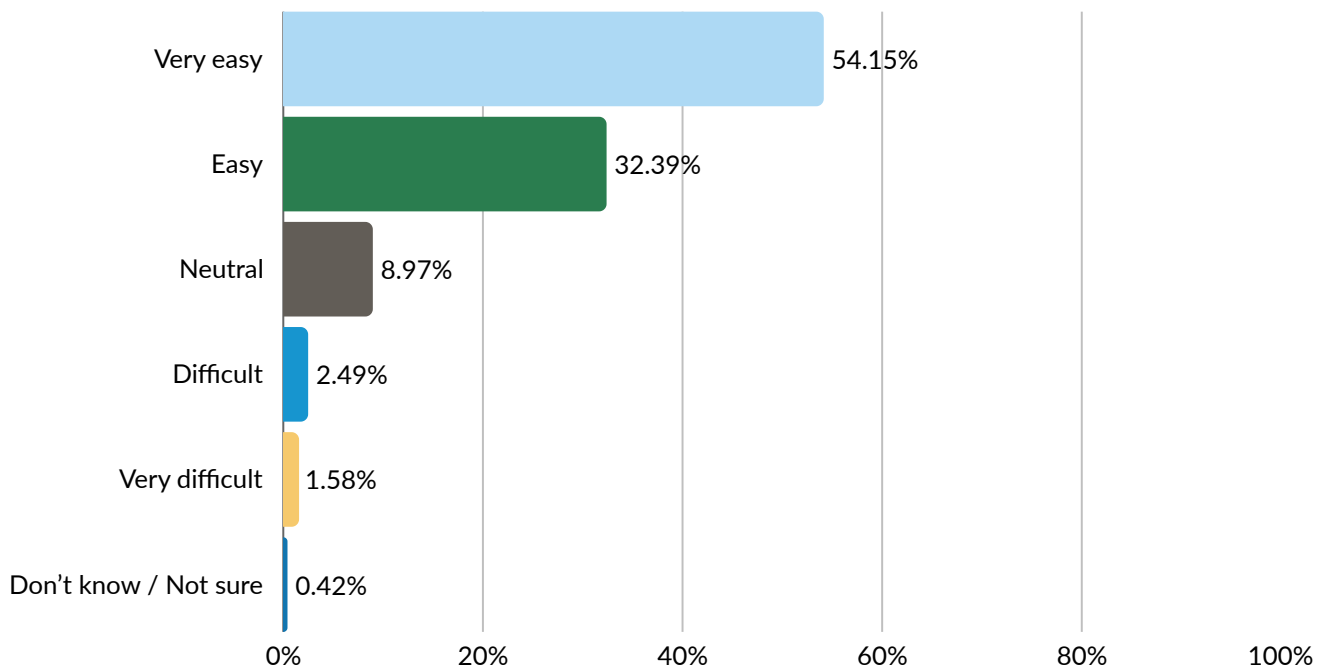
Q5. On a typical day, how many hours do you run the air purifier?



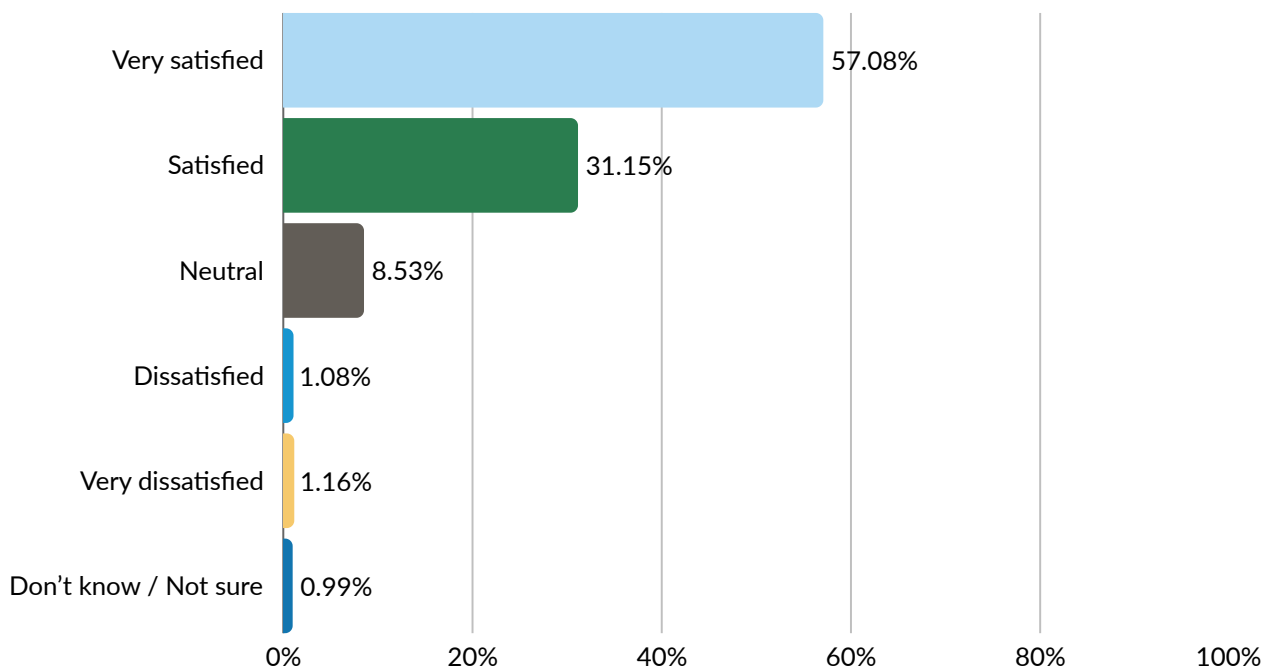
Q8. Since using the purifier, have you noticed any health improvements? (Select all that apply)



Q12. How would you rate the application and distribution process for receiving your air purifier?



Q13. Overall, how satisfied are you with the air purifier?



Conclusion

The survey results suggest that, from many respondents' perspectives, the AIRE Program is achieving its intended goals. High reported usage suggests that participants find the air purifiers useful and are willing to run them for extended periods of time. The large majority of respondents who reported being satisfied or very satisfied with the purifier, along with reported improvements in respiratory comfort, sleep, and related symptoms, suggest that the program is perceived as providing meaningful relief for households affected by the Tijuana River Valley sewage crisis.

At the same time, air purifiers cannot address the underlying sewage problem. Long-term solutions will require infrastructure improvements, strengthened cross-border collaboration, and sustained environmental management. The AIRE Program should therefore be viewed as one component of a

broader public health and environmental response. While not a permanent fix, the purifiers help reduce indoor exposure and improve day-to-day comfort as longer-term solutions continue to advance.

Overall, the Air Purifier Feedback Survey indicates that the AIRE Program is providing meaningful benefits to many households in the affected communities. It also provides insights into how participants use the devices and the program's impact.

Appendix

Survey data results from air purifier recipient responses.

Q1. Approximately how long have you been using the air purifier?		
Answer Choice	Responses	Percent
Less than 1 month	97	8.04%
1-3 months	539	44.66%
4-6 months	375	31.07%
More than 6 months	141	11.68%
Don't know / Not sure	55	4.56%

Q2. How many people live in your household (including yourself)?		
Answer Choice	Responses	Percent
1	111	9.20%
2	367	30.43%
3	259	21.48%
4	233	19.32%
5 or more	236	19.57%

Q3. How many rooms are in your home (excluding bathrooms and closets)?		
Answer Choice	Responses	Percent
1 room	42	3.48%
2 rooms	193	16.00%
3 rooms	273	22.64%
4 rooms	290	24.05%
5 or more rooms	408	33.83%

Q4. What is the approximate square footage of your home?		
Answer Choice	Responses	Percent
Less than 800 sq ft	109	9.04%
801-1,200 sq ft	313	25.95%
1,201-1,800 sq ft	409	33.91%
1,801-2,400 sq ft	145	12.02%
More than 2,400 sq ft	34	2.82%
Don't know / Not sure	196	16.25%

Q5. On a typical day, how many hours do you run the air purifier?		
Answer Choice	Responses	Percent
Less than 4 hours	196	16.24%
4-8 hours	365	30.24%
9-16 hours	172	14.25%
More than 16 hours	52	4.31%
Continuously (24 hours)	391	32.39%
Don't know / Not sure	31	2.57%

Q6. Where do you use the air purifier most often?		
Answer Choice	Responses	Percent
Bedroom	295	24.50%
Living room	806	66.94%
Kitchen	28	2.33%
Don't know / Not sure	3	0.25%
Other (please specify)	72	5.98%

Q7. What is the approximate size of that room?

Answer Choice	Responses	Percent
Small (up to 200 sq ft)	232	19.27%
Medium (200–400 sq ft)	583	48.42%
Large (400+ sq ft)	235	19.52%
Don't know / Not sure	154	12.79%

Q8. Since using the purifier, have you noticed any health improvements? (Select all that apply)

Answer Choice	Responses	Percent
Fewer headaches	241	19.97%
Fewer allergy or asthma symptoms	420	34.80%
Less coughing or throat irritation	371	30.74%
Less eye irritation	271	22.45%
Better sleep	321	26.59%
Improved breathing comfort	398	32.97%
No health improvements noticed	204	16.90%
Don't know / Not sure	228	18.89%
Other improvement	89	7.37%

Q9. Has the air purifier helped with odors in your home?

Answer Choice	Responses	Percent
Yes, significantly reduced odors	402	33.31%
Yes, somewhat reduced odors	552	45.73%
No noticeable change	196	16.24%
Odors seem worse	2	0.17%
Don't know / Not sure	55	4.56%

Q10. Since using your air purifier, have you noticed any change in your household's electricity usage?

Answer Choice	Responses	Percent
Increased	459	38.06%
Decreased	11	0.91%
No noticeable change	426	35.32%
Don't know / Not sure	310	25.70%

Q11. How did you hear about the program?

Answer Choice	Responses	Percent
Social Media	305	25.29%
Family, Friend, Neighbor	452	37.48%
Community Event	127	10.53%
News	255	21.14%
School	110	9.12%
Other	83	6.88%

Q12. How would you rate the application and distribution process for receiving your air purifier?

Answer Choice	Responses	Percent
Very easy	652	54.15%
Easy	390	32.39%
Neutral	108	8.97%
Difficult	30	2.49%
Very difficult	19	1.58%
Don't know / Not sure	5	0.42%

Q13. Overall, how satisfied are you with the air purifier?

Answer Choice	Responses	Percent
Very satisfied	689	57.08%
Satisfied	376	31.15%
Neutral	103	8.53%
Dissatisfied	13	1.08%
Very dissatisfied	14	1.16%
Don't know / Not sure	12	0.99%