

Tijuana River Valley Sewage Emergency: Community Assessment for Public Health Emergency Response (CASPER) Results



Ankita Kadakia, M.D.
Interim Public Health Officer
County of San Diego

Agenda

1. CASPER Results (Highlights)
2. County of San Diego Plan of Action
3. Closing & Summary

Community Public Health Needs Assessments in Response to the Tijuana River Valley Sewage Crisis

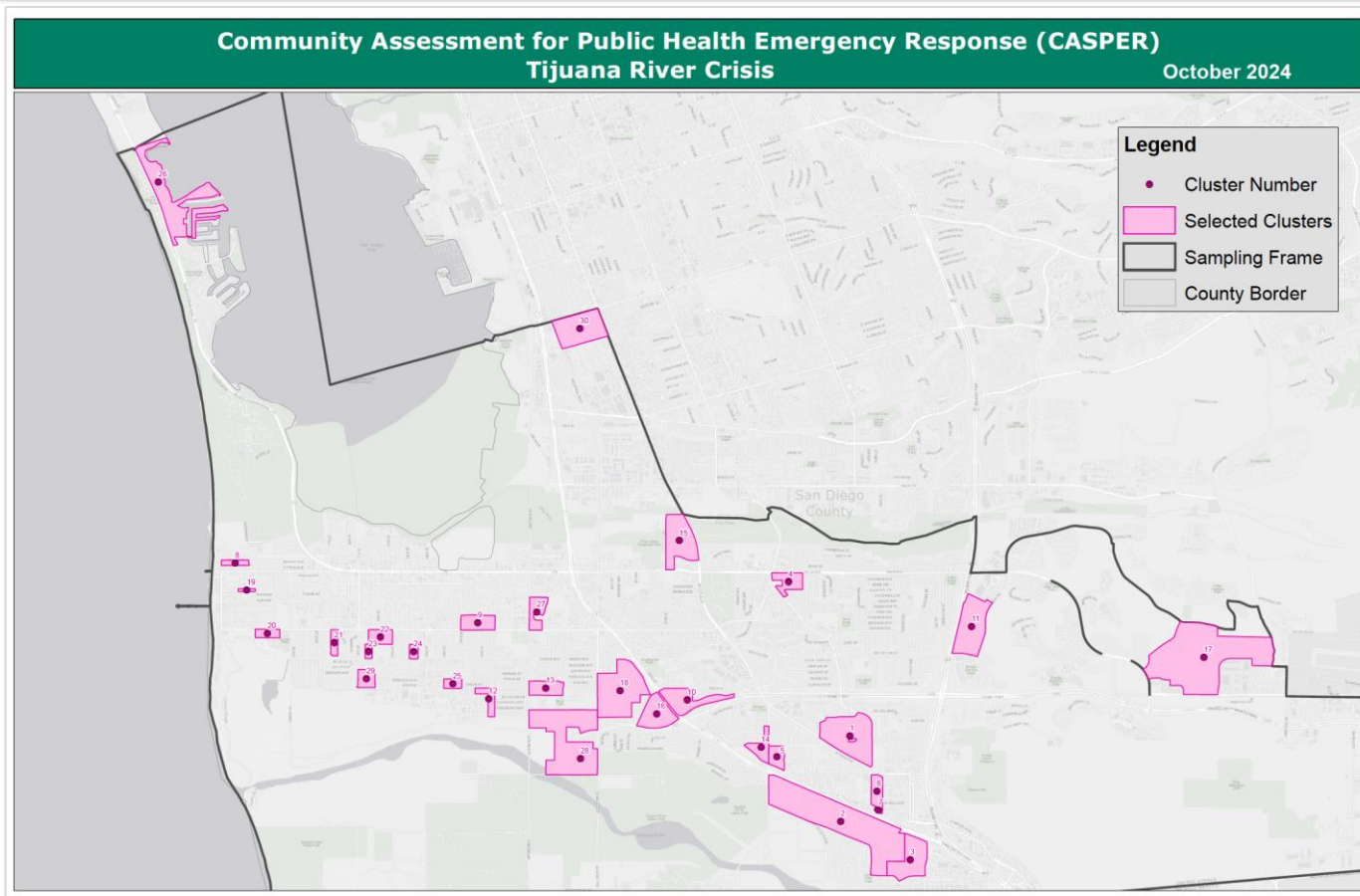


Goals & Objectives

- **Goal:** Assess household-level impacts via a survey in the South region of San Diego County related to sewage exposure from the Tijuana River Valley
- **Objectives:**
 - Determine the community's health needs and status, including behavioral and mental health
 - Understand household concerns of air and water exposure from the sewage
 - Describe household health experiences related to the sewage contamination
 - Identify preferred methods of communication and resource needs
- **Caspers conducted during Flint Water Crisis, Deep Water Horizon Crisis, Hurricane Harvey**

Selected Clusters For CASPER

Designed to represent the 40,911 households in the South Bay/Tijuana River Valley Region



Response Rates



Teams went to 480
households

39.4%
Contact



333 households
answered the door

56.8%
Cooperation



189 households
completed interviews

90.0%
Completion

All data presented are weighted data unless otherwise noted

Household Experiences

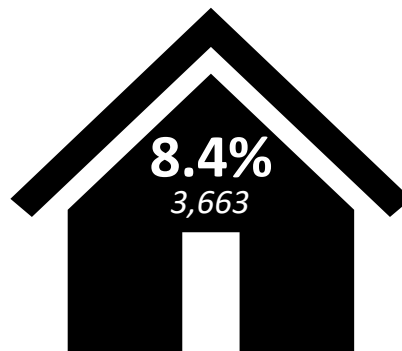


SOURCE: San Diego Union-Tribune

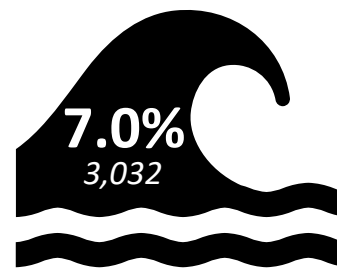
Top Household Concerns



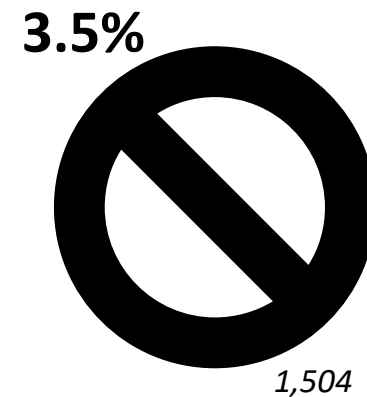
Health of Household



Property

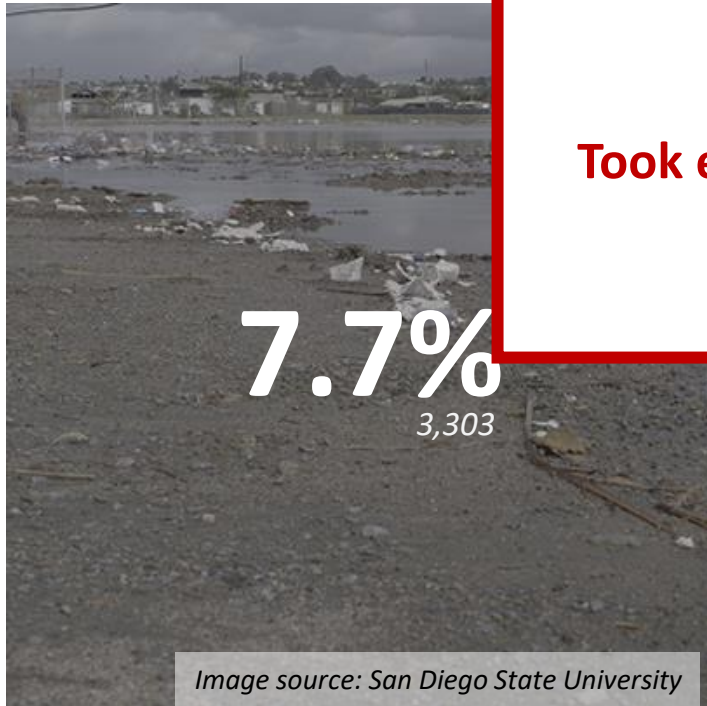


Other



Nothing

Contact with Contamination in Past Month



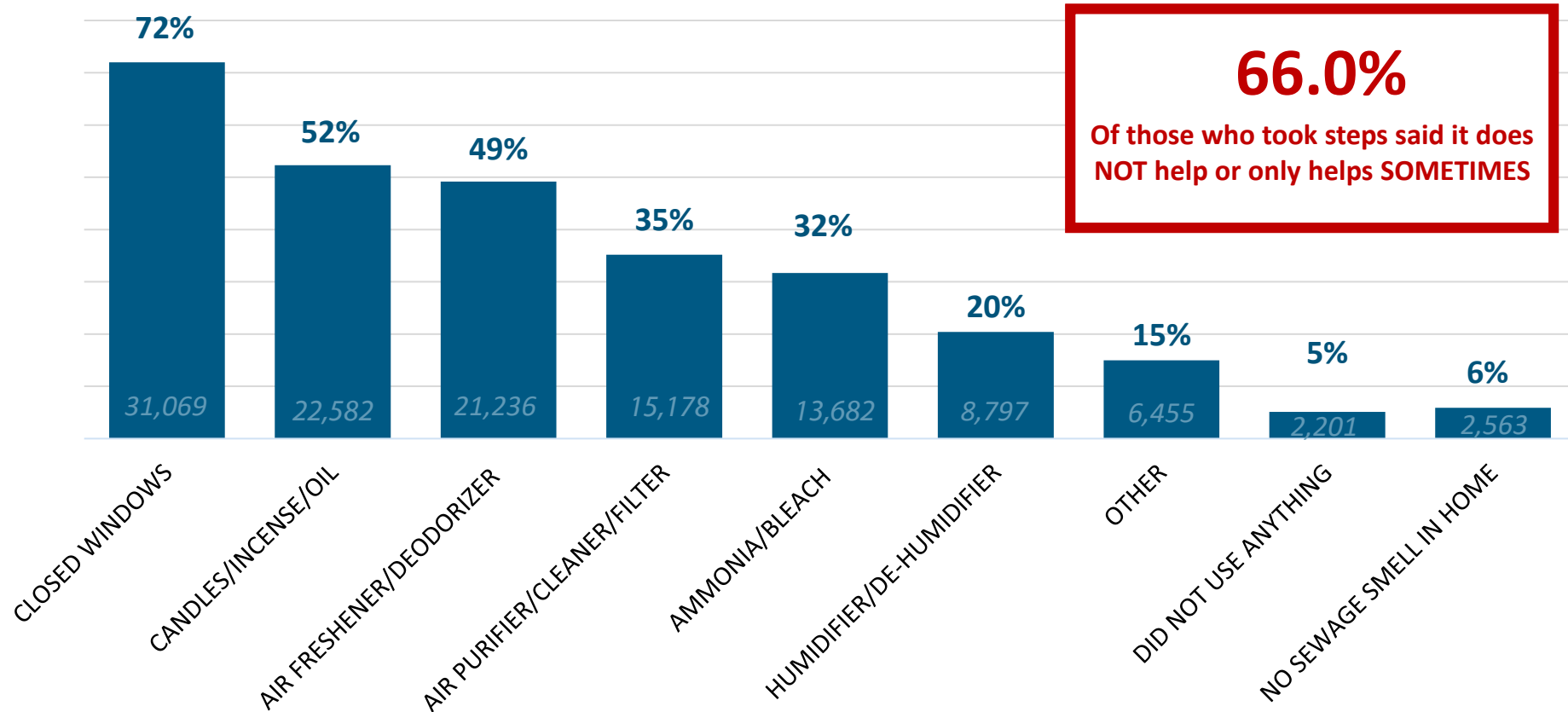
Direct Contact w/River Water

65.4%
Took extra steps to **AVOID**
certain areas
28,215



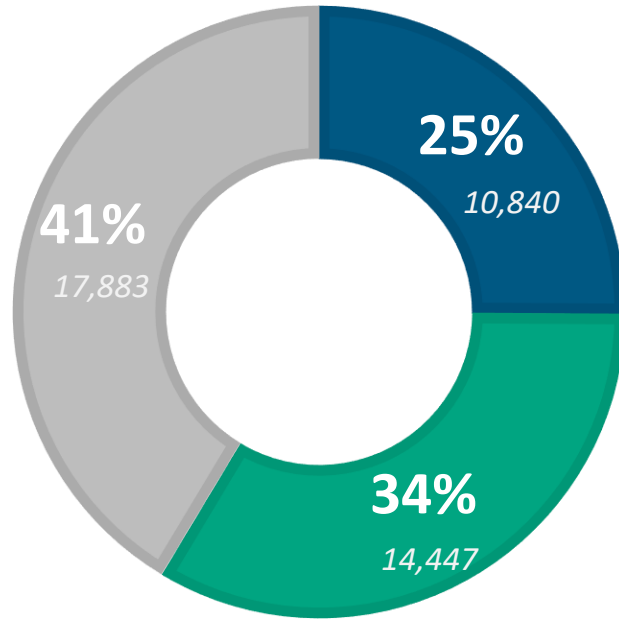
Direct Contact w/Beach Water

Action taken to reduce sewage smell



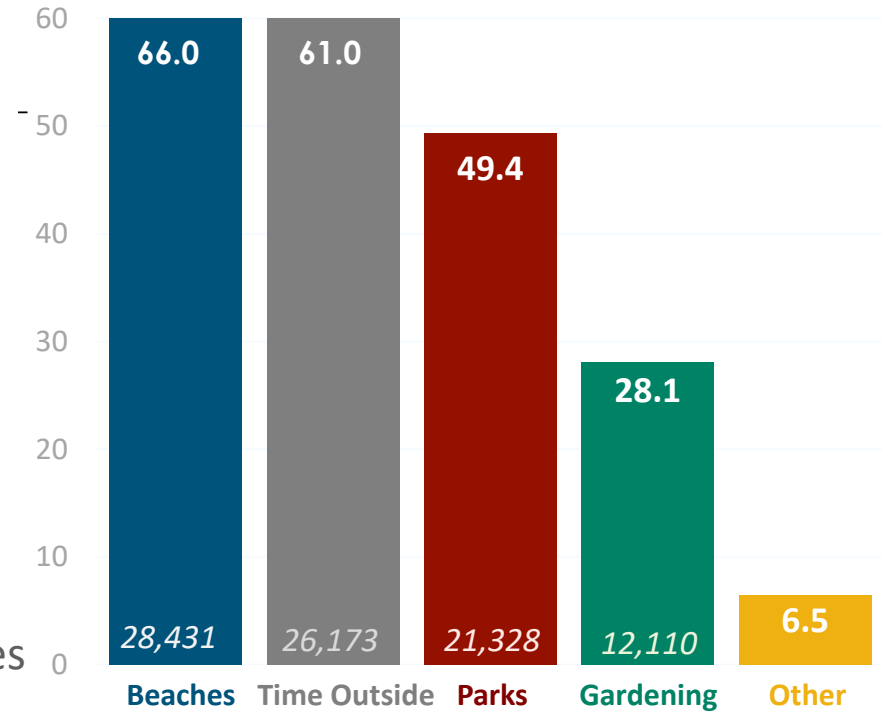
Preliminary Results, Not for Distribution

Impact on Daily Life



- Yes - Many changes
- Yes - Some changes
- No changes

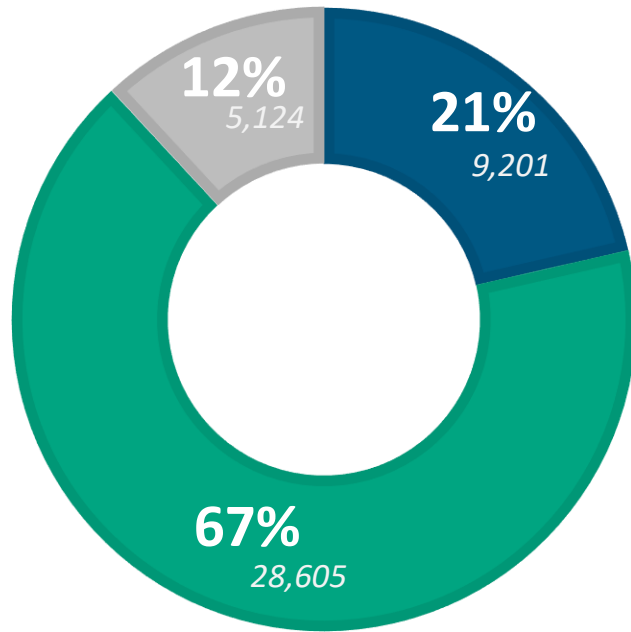
Changed Activities/Routines



Decreased Outdoor Activities

Preliminary Results, Not for Distribution

Impact on Drinking Water



■ Tap/city ■ Bottle ■ Other

Source of Drinking Water

28.2%

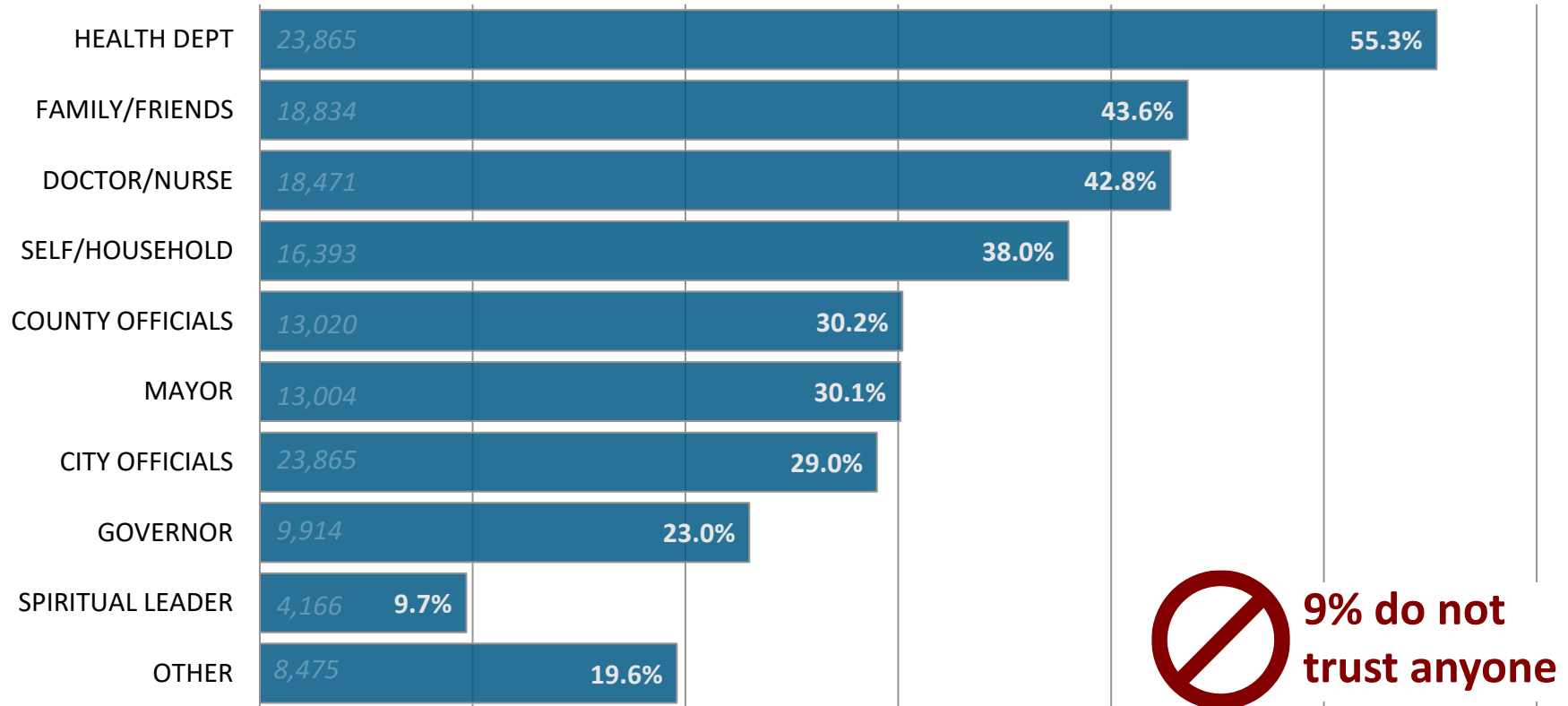
Changed source of their drinking
water since the crisis began

12,108

Communications



Most Trusted Source for Accurate Information



Preliminary Results, Not for Distribution

Opinions & Beliefs

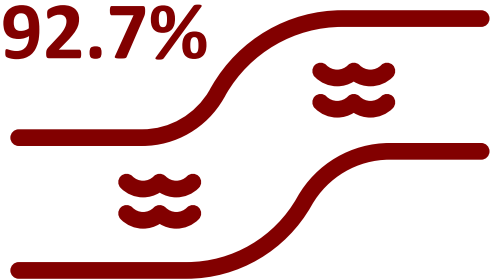


Preliminary Results, Not for Distribution

SOURCE: Getty Images

Household Beliefs

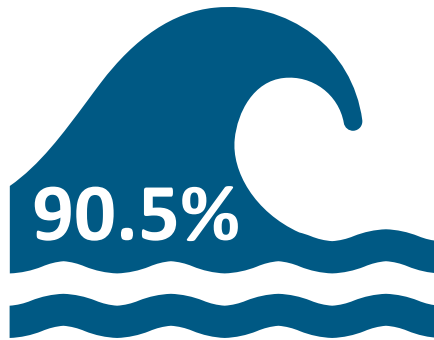
92.7%



**Believe quality of Tijuana
River water is NOT OK**

40,004 households

90.5%



**Believe quality of nearby
ocean water is NOT OK**

39,079 households

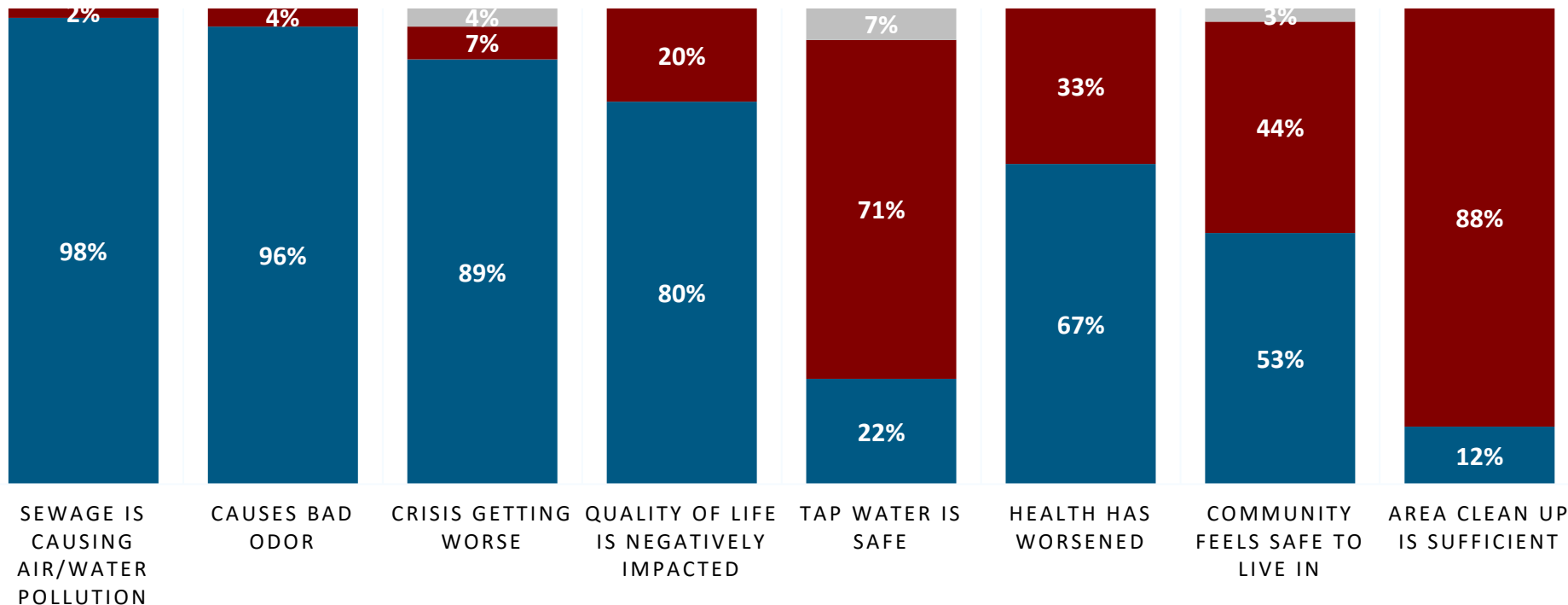
77.0%



**Believe quality of
air is NOT OK**

33,241 households

Household Opinions on the Crisis



■ TRUE ■ FALSE ■ DK

Preliminary Results, Not for Distribution

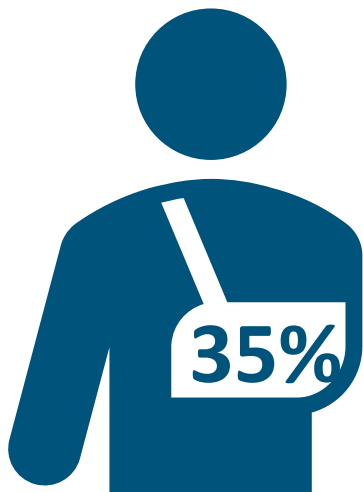
Physical Health

HEALTH

Preliminary Results, Not for Distribution

SOURCE: NewsLab.org

Household Health



(15,198 HHs)

Overall Health is Fair/Poor

69%

1+ member with health symptoms from crisis

70%

**Improve when
leave area**

17%

**Haven't left
area**

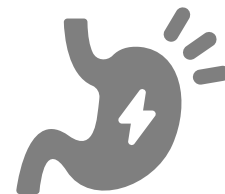
Health Symptoms *Caused by Sewage Crisis*

45%

1+ member with health symptoms in past month



80%
Headache



72% Nausea/
Upset Stomach



62%
Cough



61% Dry/
Irritated Throat



51%
Dizziness



50% Shortness
of Breath



49%
Fatigue



45%
Migraine

Behavioral & Mental Health

M E N T A L
H E A L T H

Home Feels Safe

32%

13,879 HHs

Reported their home feels UNSAFE to live in

3%

Don't know

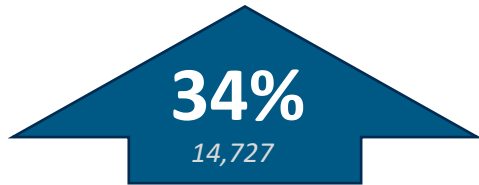
1,216 HHs

65%

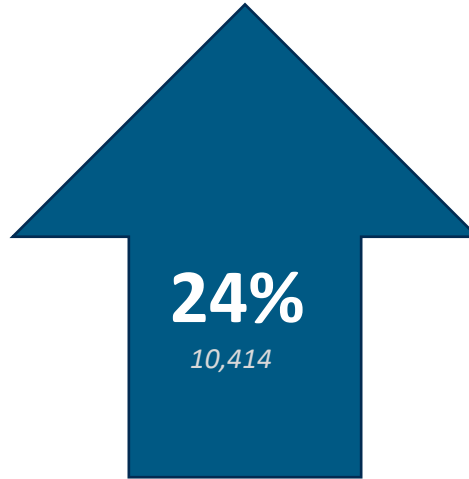
Feel safe

28,074 HHs

Impact of Crisis on Household Stress



INCREASED A LITTLE



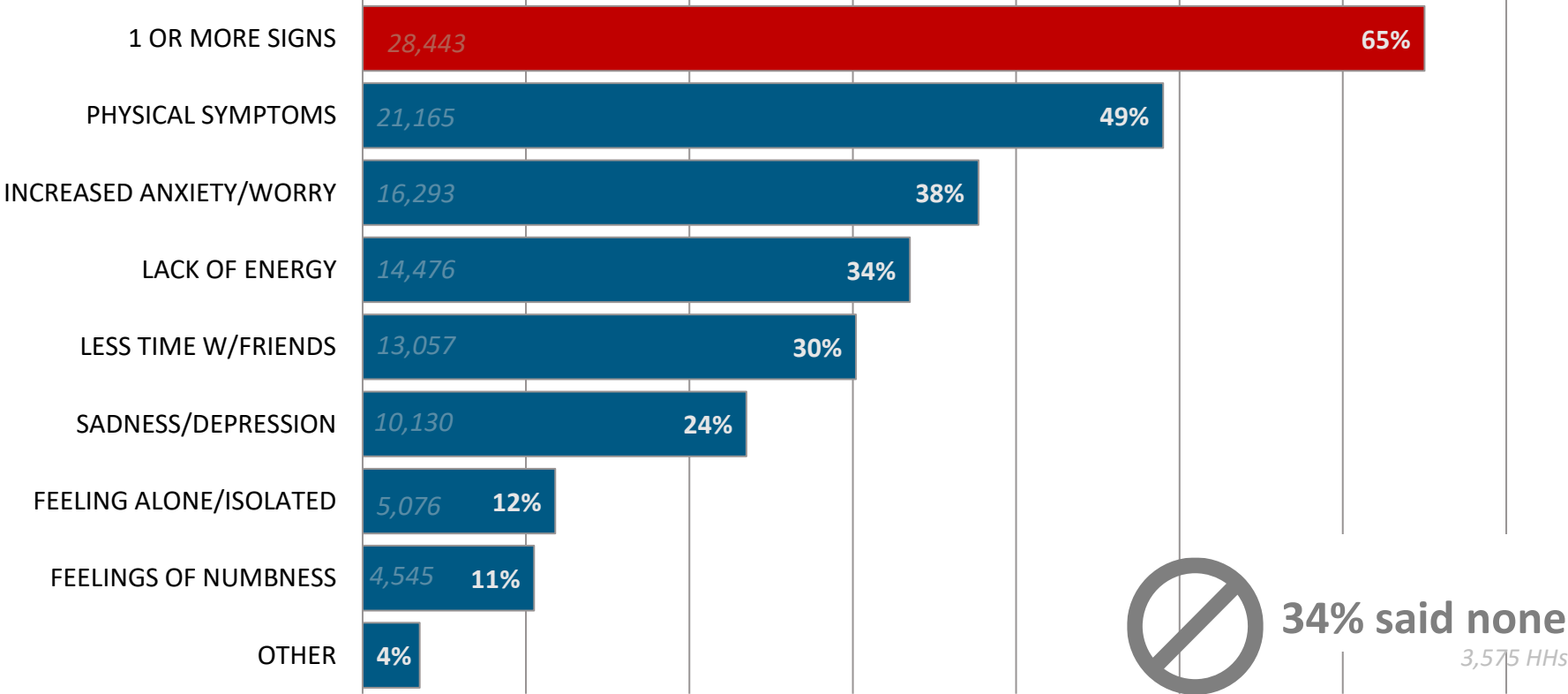
INCREASED A LOT



41%
17,789

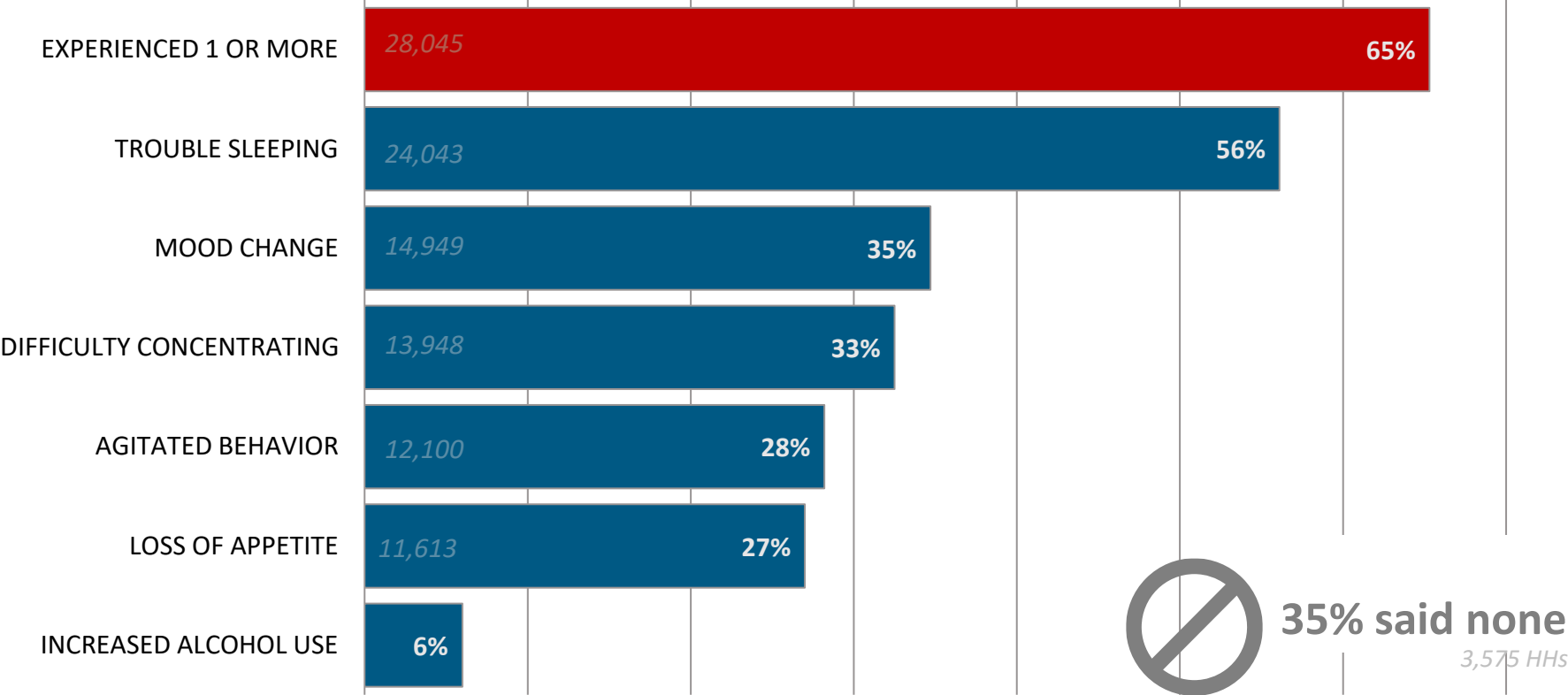
NO CHANGE

Household Signs of Emotional Distress



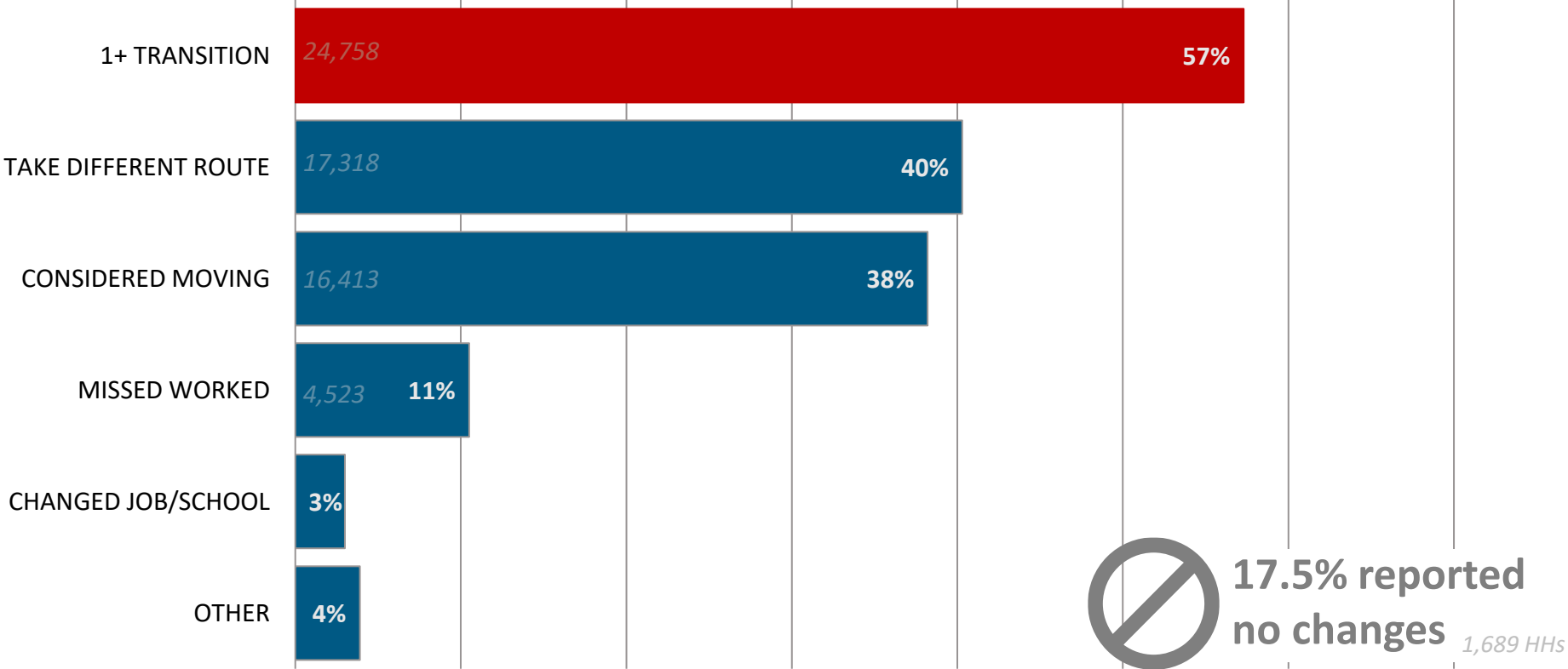
Preliminary Results, Not for Distribution

Household Behavioral Health Indicators



Preliminary Results, Not for Distribution

Household Adaptive Changes



Preliminary Results, Not for Distribution

Key Findings: Household Experiences

- 87% are somewhat or very concerned about the sewage crisis
- 81% are MOST concerned about health of HH members
- 70% had 1+ disruption to their household life
- 77% believe the quality of the air in the area is not OK
- 71% do not believe their HH tap water is safe to drink
- 65% have 1+ worsening health conditions in the past month
- 58% reported overall stress level has increased
- 63% reported 1+ signs of emotional distress
- 65% experienced 1+ behavioral health indicators

County of San Diego: Actions Being Taken



County of San Diego Action Taken

- **Collaboration, Coordination, & Advocacy for South Bay Communities**
 - Continue our Monthly Meetings:
 - South Bay School Districts Leadership Meeting
 - South Bay Health Care Clinics and FQHCs
 - All Agency Meeting- Continue Monthly meeting with local, state, and federal partners

Local

- San Diego Air Pollution Control District
- County of San Diego
- South Coast Air Quality Management District
- San Diego Regional Water Quality Control Board

State

- California EPA
- State Water Resource Control Board
- California Department of Public Health
- Coastal Commission
- California Air Resources Board (CARB)

Federal

- US Environmental Protection Agency
- Agency for TOXIC Substances and Disease Registry (ATSDR)
- Office of Community Health Hazard Assessment (OCHHA)
- National Center for Environmental Health
- International Boundary & Water Commission

County of San Diego Action Taken

■ Collaboration, Coordination, & Advocacy

- In May 2024, ATSDR received a petition from members of California's congressional delegation requesting that CDC/ATSDR investigate the public health impacts of wastewater contamination in the Tijuana River and surrounding communities.
- ATSDR worked with the County and APCD to secure data for the petition.
 - ATSDR response activities will include (1/8/25):
 - Conduct a public health assessment of hydrogen sulfide in air
 - Analyze air monitoring data to determine whether breathing hydrogen sulfide in air near the Tijuana River could harm people's health.
 - Will also determine whether surface water, sediment, and biota data are sufficient for public health assessment purposes.
- County will continue to collaborate with ATSDR for response activities.

Preliminary Results, Not for Distribution



County of San Diego Actions Taken

■ Drinking Water Concerns

- Letter sent by Interim PHO to State Water Board, Deputy Secretary and Special Council on Water Policy with specific actions:
 - **Educate the community** through proactive outreach, media, and social media on how drinking water is tested and kept safe in their community
 - Explore increasing the **frequency of testing of drinking water** to ensure the water remains safe and share these results with the community
- Working closely with Cal-Am and other regional water agencies and regional Water Board on their messaging.



County of San Diego Actions Taken

■ Mental Health Concerns

- Working with County Behavioral Health Services (BHS) on education and health promotion
 - [Mental Wellness Resource Directory](#)
 - [Community Toolkit](#) available in multiple languages
 - Distributed mental health resources during ACE survey to South Bay participants
- Promote 988 crisis line for resources and mental health evaluations
- Consider messaging through insurance carriers on mental health services available
- Focused partnership with key Outpatient Providers
 - BHS' Communication & Engagement Team
 - South Region Collaborative

Preliminary Results, Not for Distribution



County of San Diego Actions Taken

- **Healthcare Provider as Trusted Messenger**
 - Distributed information on ACE survey to FHCSO, SYHCSO, South Bay Clinics, Kaiser to increase participation from vulnerable populations.
 - Continue Meeting with South Bay Clinic providers to update on surveillance activities, ongoing projects, and receive real time feedback on clinic data related to the sewage crisis.
 - Working on separate project to improve clinic level surveillance provided to the health department.



County of San Diego Actions Taken

- **Increased Pet health concerns**
 - One Health Epidemiology team (Veterinarians + Epidemiologists) housed in the health department:
 - Engaging with vets, animal hospitals, and Humane Society in South region on sewage related pet concerns
 - Inquiring about cases of concern linked to the sewage crisis and obtaining data streams and no increases in illness, pet deaths noted



County of San Diego Actions Taken

■ Other Efforts

- Air Purifier Distribution by APCD
 - Initial Distribution Events
 - Children, Seniors, Proximity to Wastewater Flows
 - 3 events in December. 300+ filters distributed
 - Expand to Wider Community in late January
 - Online Registration Portal
 - Direct Delivery from Manufacturer
 - Additional Partner Distribution Events
- UCSD Predictive Modeling - County helping develop advance resident warning of air pollution events.



County of San Diego Actions Taken

- **Assessment for Chemical Exposures (ACE) survey**
- **County partnered with ATSDR on ACE**
 - Closed on November 22, 2024.
 - ~2,150 surveys completed.
 - Results anticipated in early 2025.
 - Will provide further individual level data for sewage related exposure concerns for South Bay residents.



Preliminary Results, Not for Distribution

CASPER Communications Plan

- Board Briefings
- City managers (Imperial Beach, Coronado, and San Diego)
- Elected officials
- SDSU students, UCSD, and County CASPER participants
- Tijuana River Valley Taskforce
- Other: All Agency, South Bay School Leadership, South Bay Healthcare Providers, and South Region Promotoras/Community Health Worker Briefings
- Dedicated website with multiple resources for community and school specific guidance, CASPER dashboard and CDC full result in multiple languages ([South Region Health Concerns](#))

CASPER Dashboard Live Jan 16



Health & Human Services Agency

Centers for Disease Control and Prevention and San Diego County Community Health Survey, October 2024 Tijuana River Valley & Beach Water Sewage Crisis

[Download Report](#)

[About](#) [Demographics](#) [Household awareness and experiences](#) [Disruptions to household life](#) [Household opinions and beliefs](#) [Communication preferences](#) [Physical health](#) [Behavioral health](#) [Pet health](#) [Individual-level mental health](#)



[Contact rate](#)
39.4%

189 surveys/480 doors knocked



[Cooperation rate](#)
56.8%

189 surveys/333 doors answered

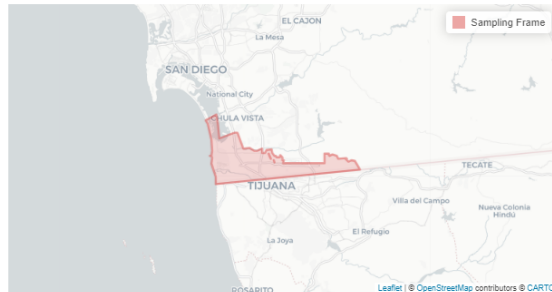


[Completion rate](#)
90%

189 surveys/goal of 210 surveys

Sampling Frame for CASPER

Designed to represent the 40,911 households in the South Bay/Tijuana River Valley Region



Community Assessment for Public Health Emergency Response (CASPER)

In response to the ongoing Tijuana River Valley sewage crisis, volunteers from the County of San Diego (CSD), San Diego State University (SDSU), and the Centers for Disease Control and Prevention (CDC) went door-to-door in the South Region of San Diego between 17–19 October 2024 to conduct a Community Assessment or Public Health Emergency Response (CASPER). The survey was designed to

- Determine the community's current health needs and status, including behavioral and mental health.
- Understand household concerns of air and water exposure from the sewage.
- Describe household health experiences related to the sewage contamination.
- Identify preferred ways to communicate.

Preliminary Results, Not for Distribution

Closing

- **Focus on the Root Cause**
 - Appreciate the state and federal advocacy to fix the sewage infrastructure
 - Significant Funding has been acquired to fix sewage infrastructure
 - Reopening of the San Antonio de los Buenos treatment plant south of Tijuana on the Mexican coast. The plant is due to be operational again in mid-January.
 - Once online, it will take on 18 million gallons of sewage a day, decreasing impacts on the coastline on both sides of the border.
 - Continued local, state, and federal engagement using scientifically validated study results for advocacy of additional TJRV funding

THANK YOU

ANY QUESTIONS?

Dr. Ankita Kadakia, Interim Public Health Officer

Ankita.Kadakia@sdcounty.ca.gov

Elizabeth Hernandez, Director of Public Health Services

Liz.Hernandez@sdcounty.ca.gov

Heather Buonomo, Division Director of Environmental Health & Quality

Heather.Buonomo@sdcounty.ca.gov