

Tijuana River Valley Sewage Emergency: Assessment of Chemical Exposure (ACE) Results



**SEWAGE/CHEMICAL
CONTAMINATED WATER**

**WATER CONTACT
MAY CAUSE ILLNESS**



BY ORDER OF THE HEALTH OFFICER
COUNTY OF SAN DIEGO
ENVIRONMENTAL HEALTH & QUALITY
(619) 336-2073 sdbeachinfo.com



ACE Goals and Objectives



- **Goal:** Assess individual-level impacts through an ***on-line survey*** related to sewage exposure from the Tijuana River Valley
- **Objectives:**
 - Understand concerns of air and water exposure from contamination
 - Explore concerns about residential, occupational, recreational and other environmental exposures and health effects
 - Obtain parents' responses on behalf of children under age 18

CASPER* vs. ACE

	CASPER	ACE
Level	Household summary responses	Individual-level responses
Method	In person interview	Self-administered on-line survey
Eligibility	Residents only	Residents, workers, visitors
Children	Child data captured as part of household response	Parents/guardians could answer for individual children
Timing	October 18 -20, 2024	October 21 - November 25, 2024
Sample	189 households interviewed	2099 completed surveys
Locations	Imperial Beach, Nestor, San Ysidro	Imperial Beach, Nestor, San Ysidro, Otay Mesa West, Silver Strand, Coronado

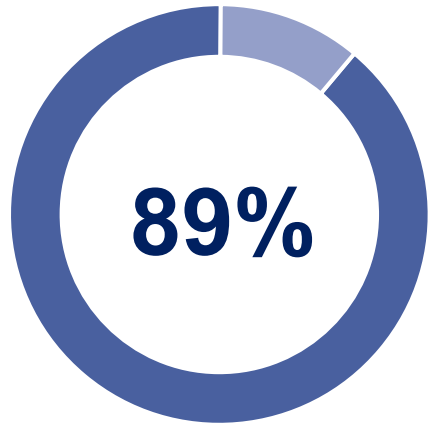
*Community Assessment for Public Health Emergency Response

Demographics

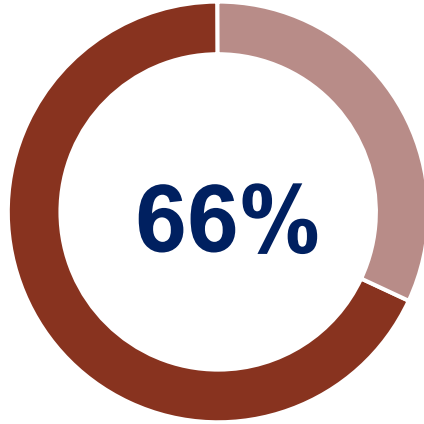


Source: San Diego Union-Tribune

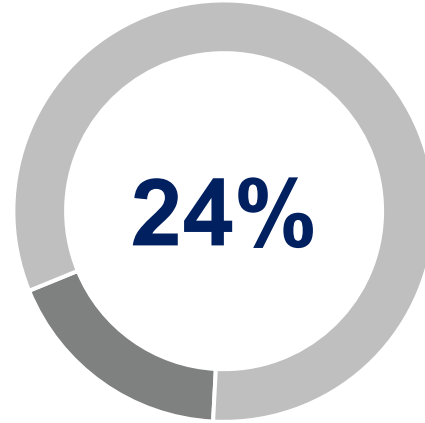
Summary of 2,099 participants



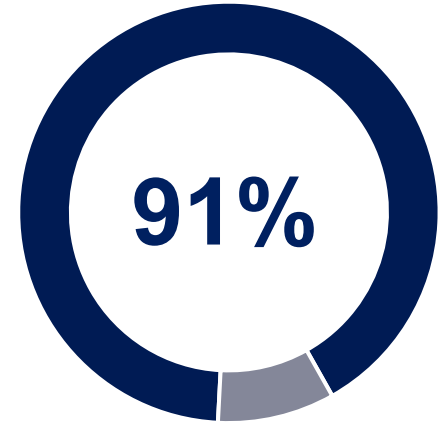
**18 years
or older**



Female

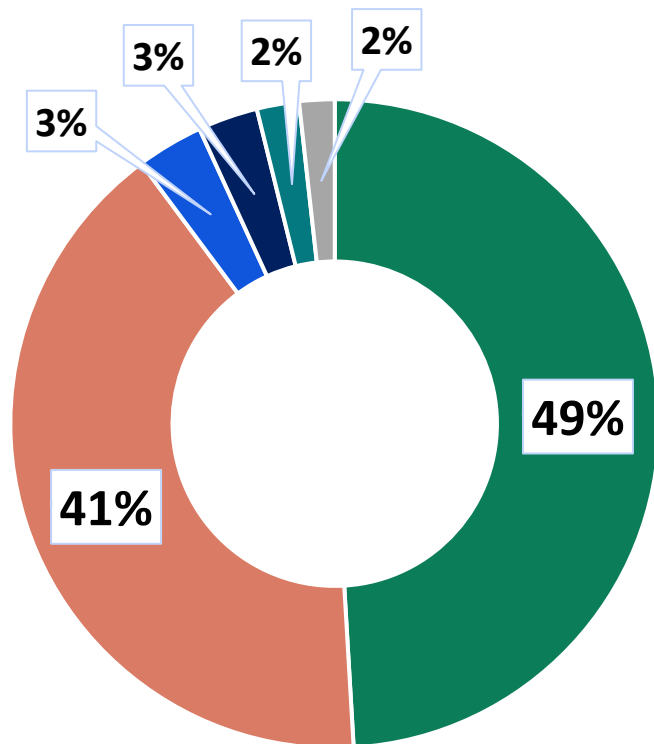


**High School
or less**



**Have health
insurance**

Race and Ethnicity



■ Hispanic/Latino (n = 1,003)

■ White* (n = 833)

■ Asian* (n = 68)

■ Multiracial*(n = 61)

■ Black/African American* (n = 43)

■ Other** (n = 36)

172 Spanish
surveys
taken

*Non-Hispanic; **Includes non-Hispanic Native Hawaiian or Pacific Islander, American Indian or Alaska Native, and Middle Eastern or North African

Reasons for Time Spent in the Affected Area



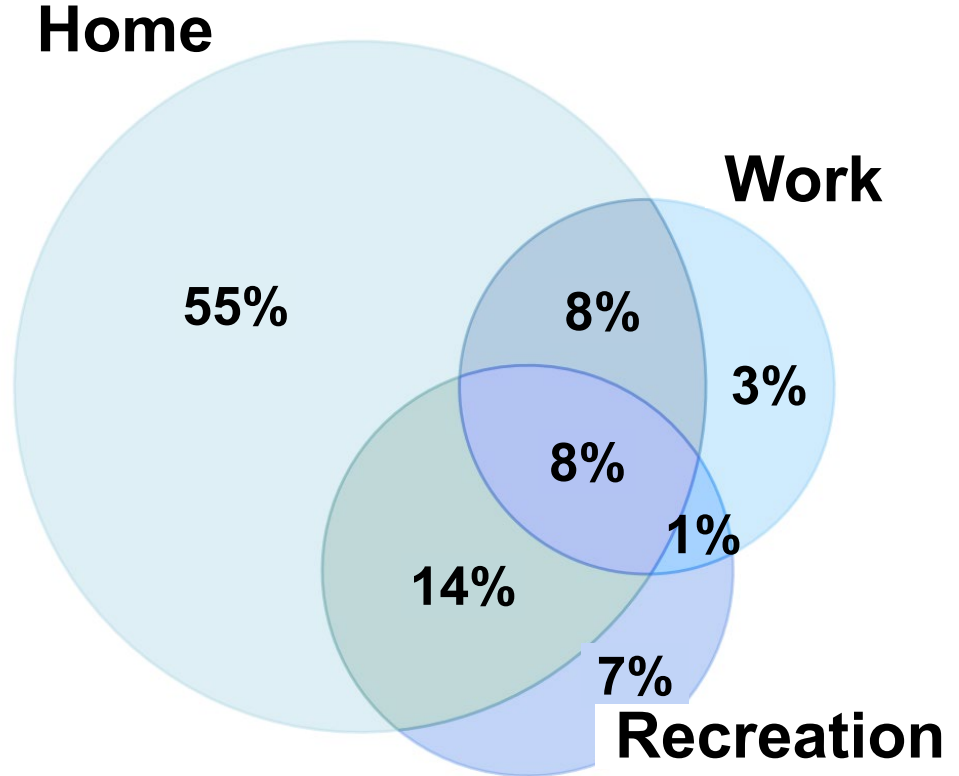
Home - 86%



Work - 21%

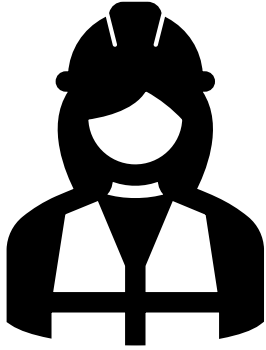


**Recreation -
31%**



Home (H): 1,158 (55.2%); Work (W): 69 (3.3%); Recreation (R): 156 (7.4%); H + R: 300 (14.3%); H + W: 171 (8.2%); H + W + R: 177 (8.4%); W + R: 26 (1.2%)*Other reasons for spending time in the affected area were excluded from this analysis: 42 (2.0%)

Among Those Working in the Affected Area (n=443)

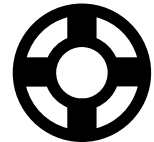


25%

**of workers had direct
contact with
contaminated river or
beach water**

Occupations with direct water contact:

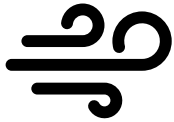
- Protective services: Lifeguards, firefighters, and law enforcement including park rangers
- Construction and extraction
- Building and grounds maintenance
- Architects and engineers



Thoughts, Concerns, and Experiences



92% of Respondents Were Very Concerned about the Sewage Crisis



97%

air
quality



96%

beach water
quality



94%

Tijuana River
water quality



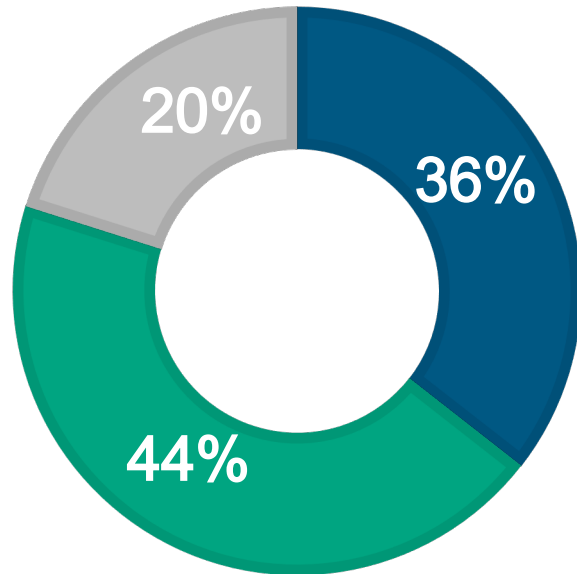
86%

drinking water
quality

82% of respondents reported
concerns on all categories

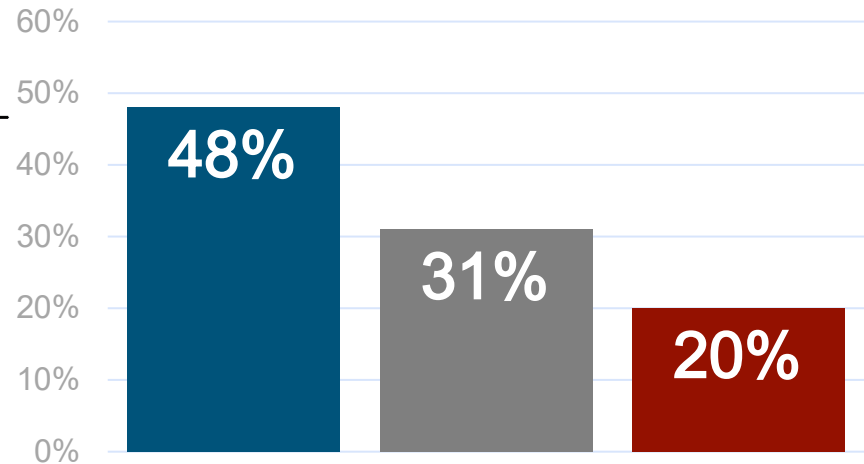
Impact on Daily Life in the Last 30 Days

Changed Activities/Routines



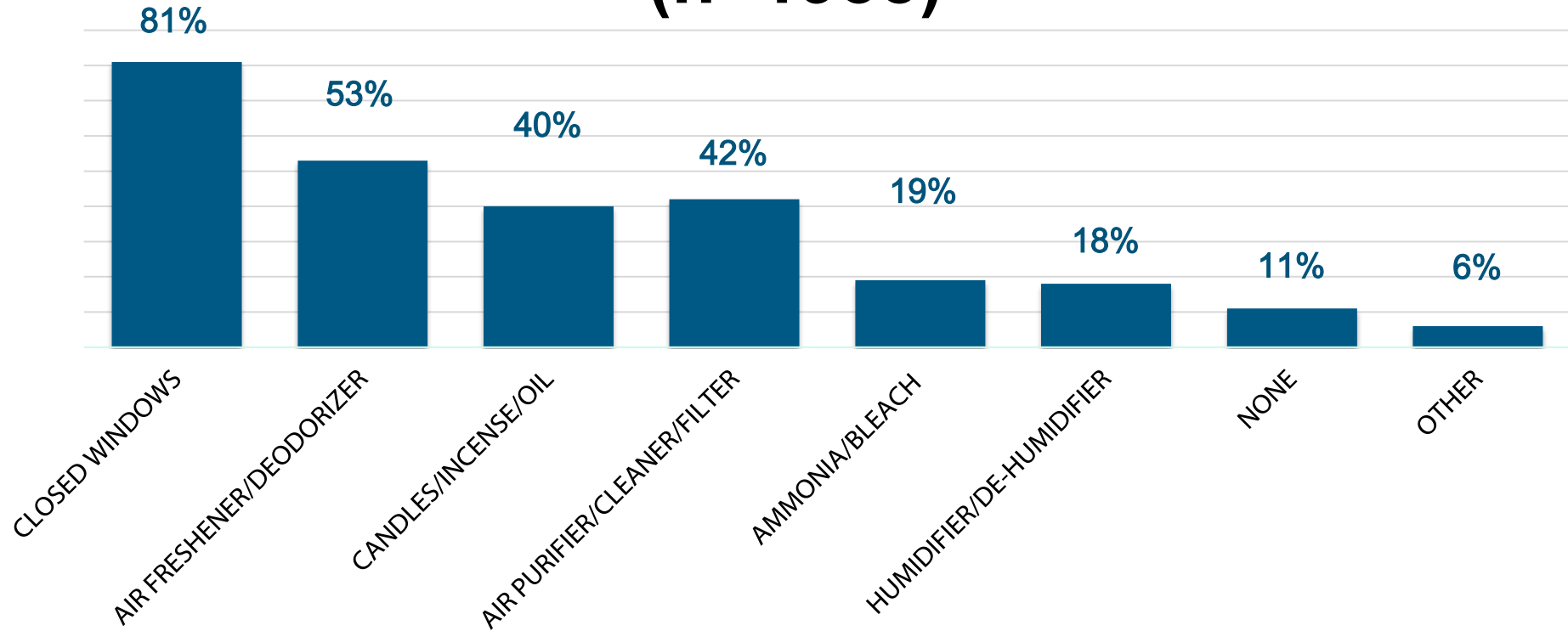
- Yes - Many changes
- Yes - Some changes

Extra Steps Taken to Avoid Area



- Yes - Frequently
- Yes - Sometimes
- No

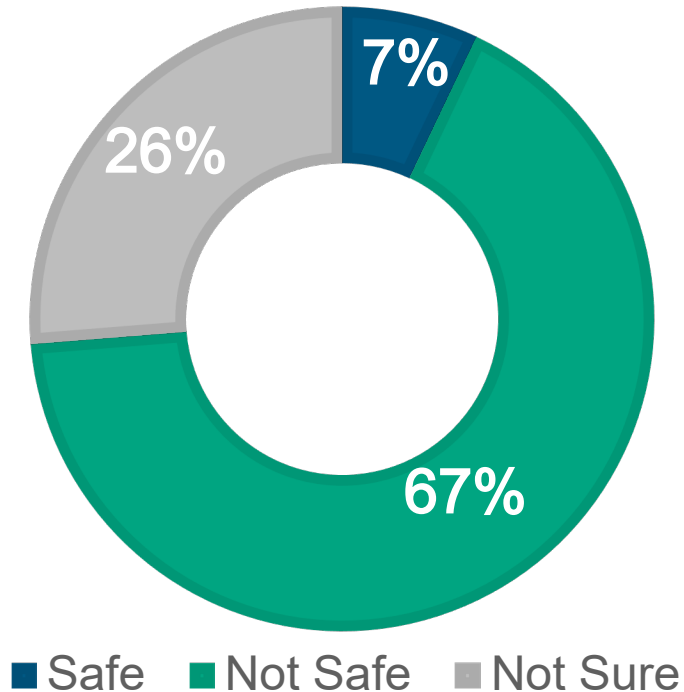
Action Taken to Reduce Sewage Smell* (n=1935)



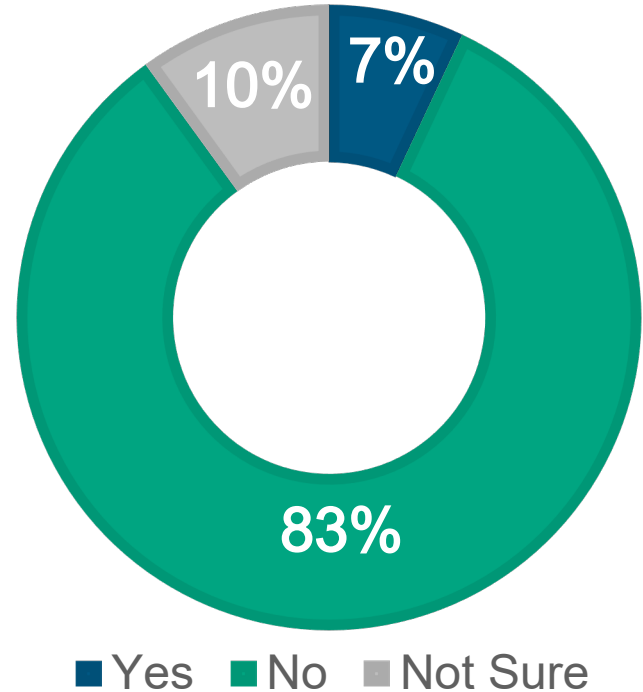
*Not mutually exclusive

Beliefs about the Sewage Crisis

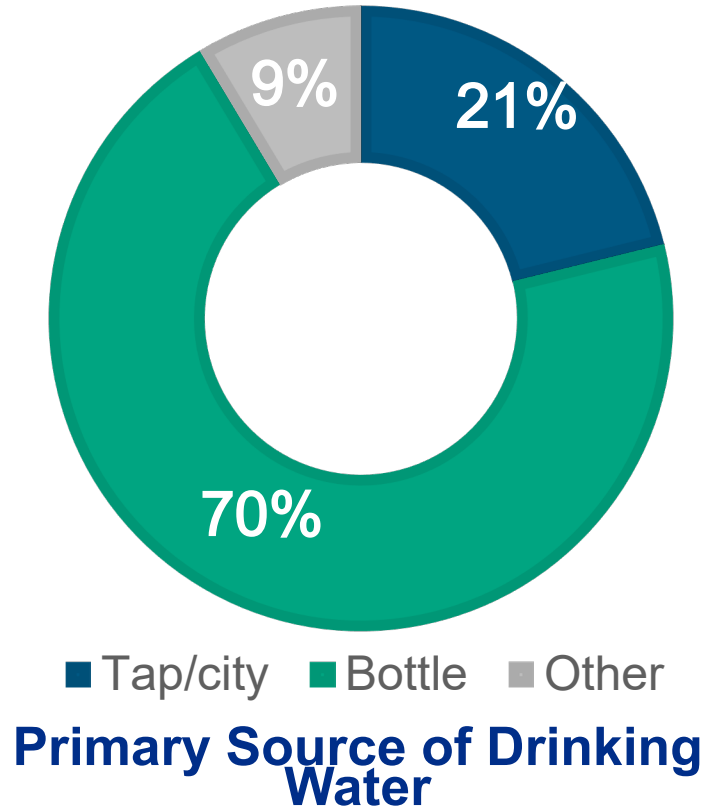
Safe to Visit, Work or Live



Sewage Clean Up Adequate

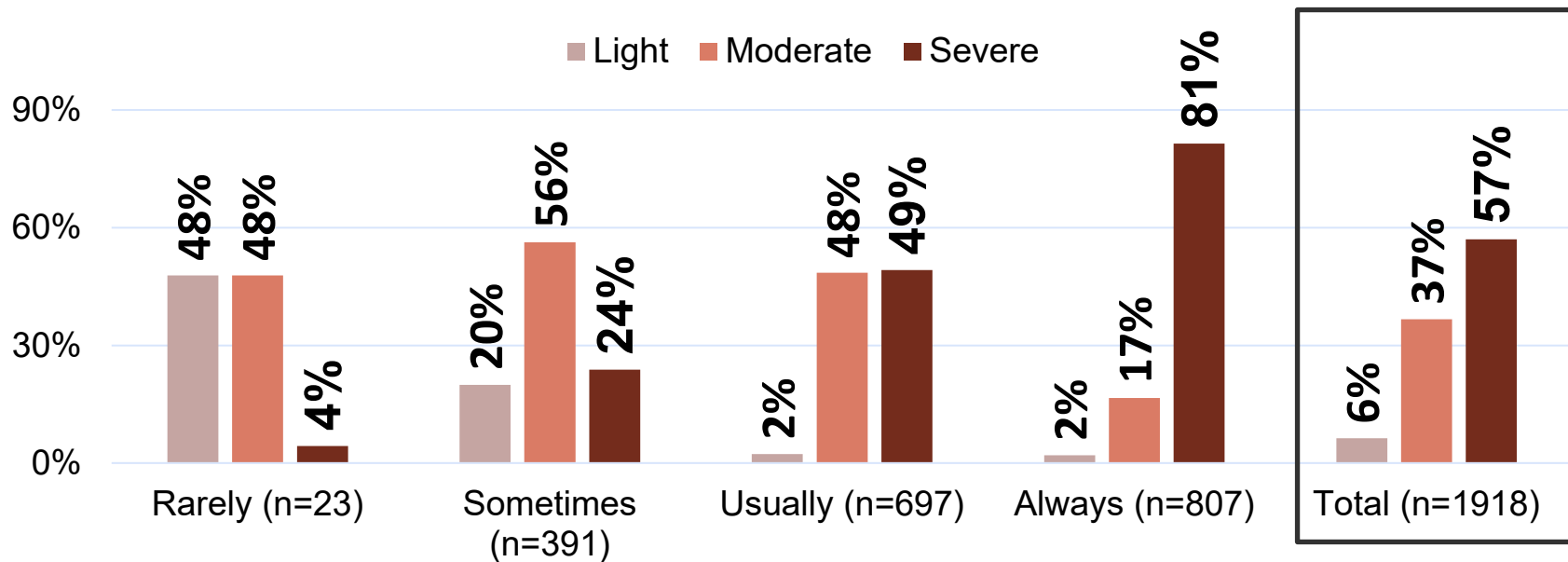


Drinking Water When in the Affected Area

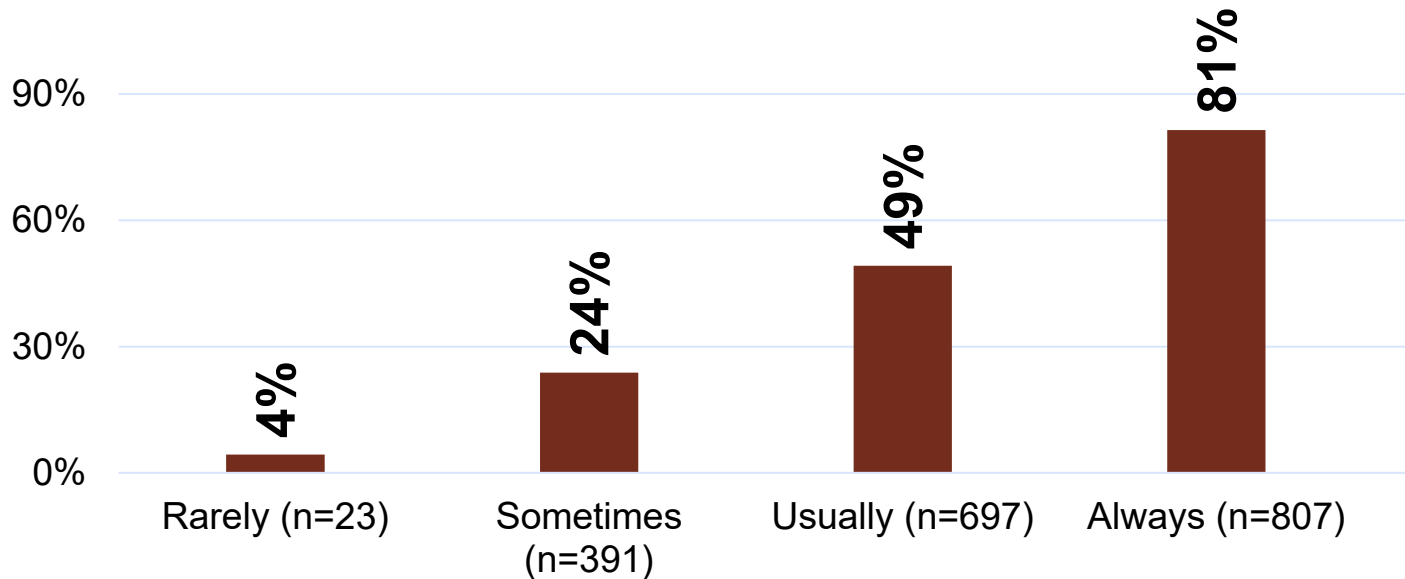


63% filter their drinking water

92% Noticed Sewage Smell in Last 30 Days

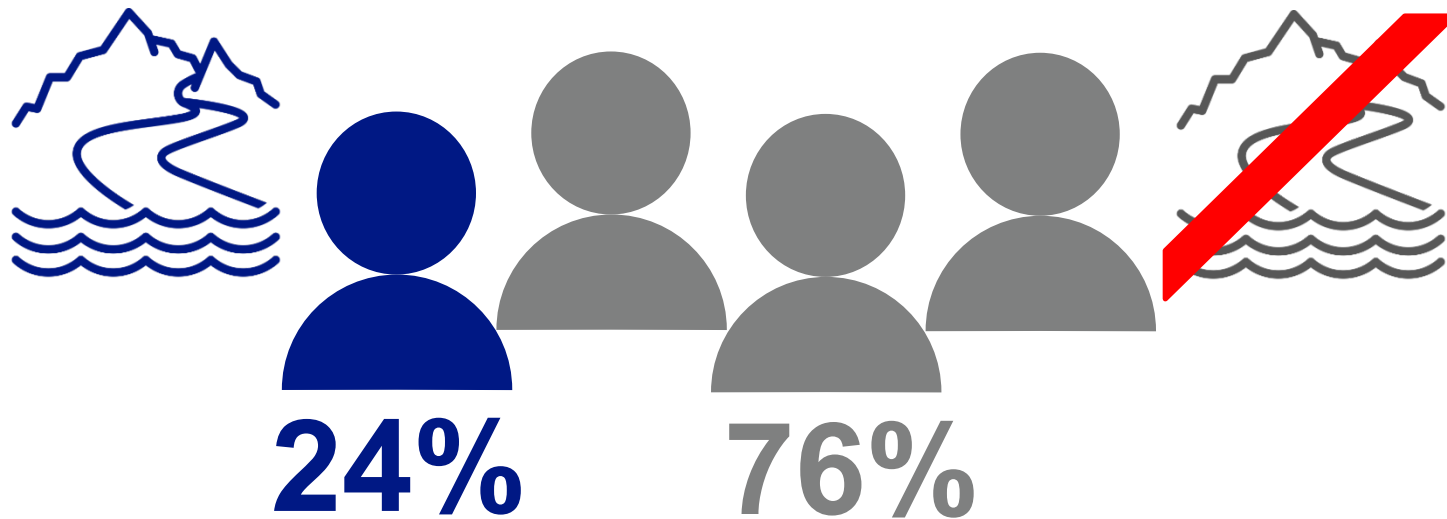


92% Noticed Sewage Smell in Last 30 Days



**The more frequent the smell was reported;
the more likely it was to be severe**

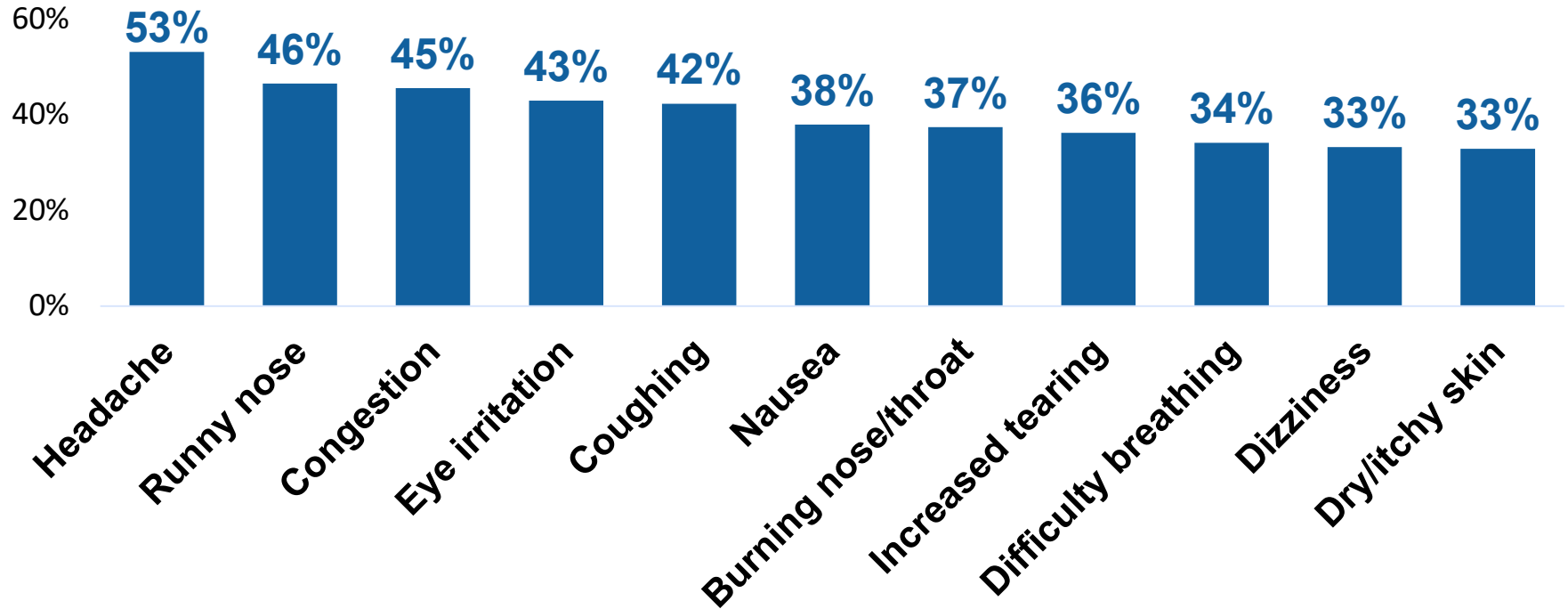
Almost 1 in 4 Participants Reported Direct Contact with Contaminated River or Beach Water



Physical Health

HEALTH

64%* Reported At Least One New or Worsening Physical Health Symptom They Attributed to the Sewage Crisis in the Past 30 Days



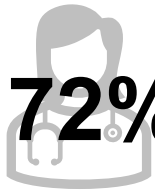
Medical Care Because of Sewage Crisis

31%

**Sought medical care because
of sewage crisis symptoms**

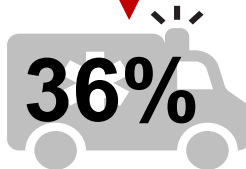
n=412/1351

72%



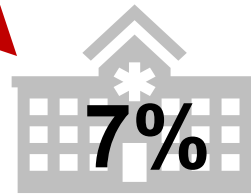
Primary Care/HCP
(outpatient)

36%



Hospital/emergency
room/urgent
care and released

7%



Hospital/emergency
room/urgent
care and admitted

(Categories Are Not Mutually Exclusive)



M₃

E₁

N₁

T₁

A₁

L₁

H₄

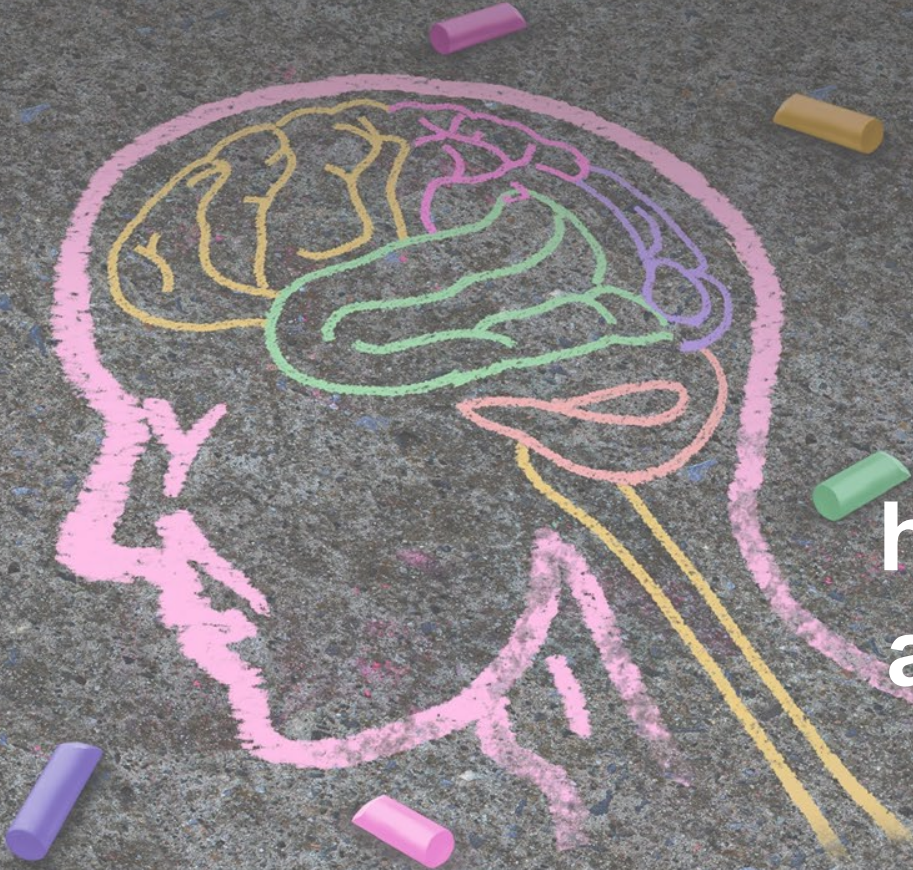
E₁

A₁

L₁

T₁

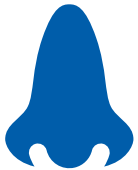
H₄



65%
feel like their
mental
health symptoms
are related to the
Sewage Crisis
(n=1200/1850)



Overall, **28% of participants*** scored 3 or more on Generalized Anxiety Disorder 2-item (GAD-2) screen indicating possible clinical **anxiety** in the last 2 weeks

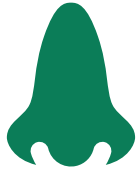


Participants reporting severe sewage smell tended to score **higher** on the GAD-2

35% participants who reported **severe sewage smell**, reported **anxiety** symptoms



Overall, **21% of participants*** scored 3 or more on Patient Health Questionnaire-2 (PHQ-2) screen indicating likely major **depression** in the last 2 weeks



Participants reporting severe sewage smell tended to score **higher** on the PHQ-2

27% of participants who reported **severe sewage smell**, reported **depression** symptoms

Key Findings: ACE

- 92% were concerned about air quality; 86% were concerned about tap water quality
- 95% reported noticing a sewage smell in the preceding 30 days; 57% said it was severe
- 24% reported direct contact with contaminated river or beach water including workers
- 64% reported at least one new or worsening physical health symptom they attributed to the Sewage Crisis in the past 30 days
- Most common symptoms attributed to the Crisis were headache or respiratory symptoms; 31% of those reporting sought medical care
- 28% of participants reported symptoms of anxiety; 21% reported symptoms of depression. Rates were higher among those reporting severe sewage smell

ACE Findings Similar to CASPER

- Widespread community concern about the sewage crisis, including air and drinking water quality concerns
- Most respondents use bottled water in the affected area
- Most respondents reported physical health symptom(s) they attributed to the sewage crisis
- Respondents also attributed mental health symptoms to the sewage crisis
- Preferred communications channels: word of mouth, TV, internet news, email, and text message
- Needs of respondents: action, water, medical or mental health care or supplies, improve water/air quality

ACE Dashboard

SanDiegoCounty.gov Home

Health & Human Services Agency

ENHANCED BY Google

MENU PROGRAMS ALL SERVICES A-Z FACILITIES ADVISORY BOARDS CONTACT US

Tijuana River Valley & Beach Water Sewage Crisis Public Health Response

Page originally published 2/16/2024. Last updated 6/25/2025.

The County of San Diego cares for South Region residents and what they are experiencing around health and quality of life issues. This website provides information and resources on the health concerns and impacts from sewage and pollution in the Tijuana River Valley and surrounding communities.

Select Language
Powered by Google Translate

COUNTY OF SAN DIEGO
HEALTH & HUMAN SERVICES AGENCY

LIVE WELL
SAN DIEGO

Accredited Health Department
PHAB
Advancing Public Health Performance
Public Health Accreditation Board

COUNTYNEWSCENTER

County Camp for Teens Shaping Tomorrow's Public Health Leaders

VIDEO: Seniors Find Safety and Security at Santa Fe Senior Village

Local Senior Finds a Happy Home

More Stories

What the County is Doing

Public Health Data

CDC Health Survey (CASPER)

ATSDR Exposures Survey (ACE)

ATSDR Public Health Assessment

Environmental Dashboard

About Environmental Odors

About Contaminated Water

[Tijuana River Valley & Beach Water Sewage Crisis Public Health Response](#)





THANK YOU

For more information, contact the Health & Human Services Agency at
phs.southregionhealth.hhsa@sdcounty.ca.gov

[SANDIEGOCOUNTY.GOV/SOUTHREGIONHEALTH](https://sandiegocounty.gov/southregionhealth)



The Public Health Services department, County of San Diego Health and Human Services Agency, has maintained national public health accreditation, since May 17, 2016, and was re-accredited by the Public Health Accreditation Board on August 21, 2023.