



CALIFORNIA WASTEWATER NEEDS ASSESSMENT (WWNA): BASELINE SURVEY

The California Wastewater Needs Assessment (WWNA) is a four-year project (2023-2027) to provide information on California’s sanitation system needs for wastewater in communities served by both, small and large wastewater systems. In the project’s early phases, the University of California Agriculture and Natural Resources (UCANR) team, conducted a baseline survey of sanitation issues to provide a rapid assessment that illustrates the scope of challenges faced by communities across the state.

Overview

The WWNA team conducted outreach to understand community sanitation needs.

The outreach was divided into three parts. First, a survey collected information on sanitation issues and needs in communities. Survey responses were sought from government agencies, technical assistance providers, private sector companies, journalists, academics, university extension, non-governmental organizations, and community advocates.

Second, a spatial database of communities with increased vulnerability to inadequate wastewater services was compiled based on survey results. The database includes locations of mobile home and recreational vehicle (RV) parks, farmworker housing, federal and state campgrounds, disadvantaged communities, and tribal communities.

Third, a field campaign will visit sites identified by the survey and surrounding areas to provide more context to survey results and document first-hand accounts of known issues, these efforts will be described in a follow up report.



Part One. Survey Results

The WWNA project team sent the survey to 166 potential respondents and received 112 answers (response rate of 67%). Of the respondents, 71 offered information on specific communities where they know sanitation issues exist. From these, 36% said that they know of these issues because “they live or work” in the communities, and 34% said they have a “professional relationship or responsibility to the community,” all demonstrating that survey results largely draw from first-hand experiences.

Importantly, survey results refined definitions* being used for two concepts:

“Sanitation is the access to safe, functional, affordable, and dignified collection and disposal of wastewater from human uses; including adequate sanitation systems, practices, and wastewater treatment to protect public health and the environment.”



“Sanitation equity is achieved when social, geographic, economic, cultural, and demographic attributes no longer predict people’s access to or quality of sanitation.”

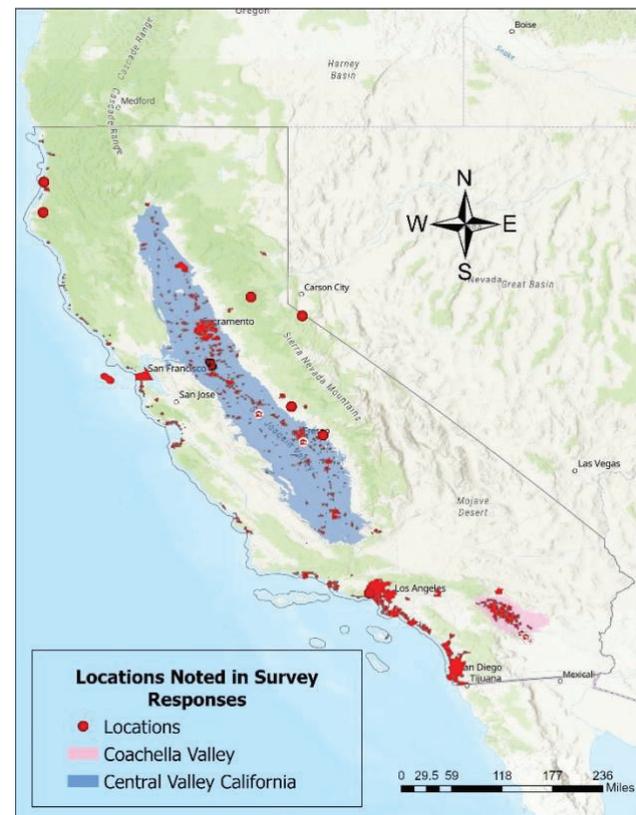
*The survey terms and definitions may differ from standard regulatory terms because the WWNA Team sought information beyond the Water Boards typical purview. Before launching the final survey, multiple iterations with volunteer participants helped refine wastewater-related terms for clarity and effectiveness. This ensured the questions were well understood and yielded meaningful responses, aligning with the survey’s overall objective. As a result, these tailored terms and definitions are specific to this report and the Baseline Survey Analysis.

1. **Long-Lasting Issues.** Most respondents (79%) noted that they became aware of sanitation issues over 10 years ago.
2. **Housing Types.** Most sanitation issues occur in single-family (32%) or multi-family (12%) residences, followed by RVs (15%) and mobile home parks (15%).
3. **Sociodemographic Factors.** Respondents indicated that sanitation issues impact non-Hispanic white (34%), Latino (28%), and mixed-race (18%) communities.
4. **Disadvantaged Communities.** Most respondents (84%) mentioned that sanitation issues primarily occur in communities that meet statewide criteria as disadvantaged.
5. **Common Issues.** Respondents noted the most common sanitation issue is reliance on septic systems (38%), followed by no or intermittent water supply at home for sanitation (13%), and reliance on mobile toilets (12%).
6. **Septic Systems.** Lack of maintenance (67%) is the most frequently reported cause of septic system issues.
7. **Lack of Water Access.** Respondents indicated that some communities have “no or intermittent” water supply at home, especially in unhouse encampments.
8. **Mobile Toilets.** Respondents indicated that mobile toilets are primarily used either “frequently at work” (33%) or “at all locations” (33%), suggesting these communities lack access to permanent toilets at least part of the time.
9. **Mismanagement.** Few respondents know of locations where raw sewage is spilling into water bodies or land. When reported, this occurred at private family residences (80%), and a few respondents noted overflows inside buildings.
10. **No or Limited Access to Toilets.** Respondents noted that they knew of a few places with no or limited toilet access.
11. **No Indoor Sanitation Plumbing.** Respondents indicated that this issue is experienced primarily in communities facing unhoused and housing insecurity.
12. **Environmental and Public Health.** Residents are showing illness symptoms due to malfunctioning septic systems (10%), use of mobile home toilets (11%), and when indoor systems are not usable or not functioning (50%).
13. **Solution Assistance.** Communities are seeking technical (22%) and financial (21%) assistance. Respondents suggested that the most feasible solution could be septic systems; however, the communities face challenges from a lack of economic and technical resources. In this case, we believe that it is necessary to generate more information to determine what type of assistance is required in the different communities.

Part Two. Geospatial Analysis Results

Five categories of communities, housing types, or land uses were identified in survey results as having potentially higher vulnerability to inadequate sanitation services. These included mobile home parks, farmworker housing, federal and state campgrounds, disadvantaged communities, and tribal disadvantaged communities (HDS, 2004; CalEPA, 2024; CDPR, 2024). This doesn't mean that all these places have sanitation issues.

Communities noted in survey responses were mapped. Some responses were general (large areas or land use types) while other responses noted specific locations.



During the field campaign, Part 3, of the baseline survey, we will visit some places to learn more about the communities and their sanitation challenges.

The baseline survey was conducted by the California Institute for Water Resources (CIWR) within the University of California Agriculture and Natural Resources (UCANR). The WWNA team is led by the University of California, Los Angeles Luskin Center for Innovation. Also, it includes staff from the State Water Resources Control Board, the Office of Water Programs at Sacramento State, and the University of Massachusetts, Amherst. For more information please visit WWNA webpage or contact WWNA@waterboards.ca.gov.