Sanitation and Wastewater in Rural Communities in the United States

The United States is one of the wealthiest countries in the world, yet it struggles with profound poverty, inequalities and disparities in access to services. Across the country, many rural communities lack access to one of the most basic services: sanitation. Wastewater infrastructure is failing, inadequate, or non-existent. This leads to the perpetual presence of wastewater in and around homes and takes a significant toll on individuals' mental and physical health. Without an adequate system to dispose of wastewater, individuals are at risk of environmental contamination and diseases such as hookworm. Lack of adequate sanitation further perpetuates cycles of poverty and marginalization through impacts on education and employment.

While the data on access to sanitation is limited, it is estimated that 540,000 households in the United States (around 1.5 million people) lack complete plumbing. In 2017, the American Society of Civil Engineers gave the United States a D+ grade for its national wastewater infrastructure. This includes municipal and on-site systems.

Individuals who have on-site systems face unique barriers in realizing the right to sanitation. While governments provide the infrastructure for centralized systems, support for rural communities and households with on-site systems is limited. On-site systems are installed on individual properties and maintained at the cost of the homeowner. This is despite the fact that on-site systems require extensive permitting, and can be costly to install and maintain. For example, in Lowndes County, Alabama, the median household income in 2018 was $28,000 (about half the national average) and on-site systems that might be able to handle the unique soil in the Black Belt can cost up to $30,000. Many residents cannot afford to purchase and maintain them and resort to straight-piping, i.e. make shift pipes and channels that run sewage from homes to yards and ditches where the waste often accumulates. Because straight-piping does not comply with septic codes in Lowndes and many other jurisdictions, homeowners face fees and fines, and the possibility of criminal charges - compounding and perpetuating cycles of poverty and marginalization.

Lowndes County is unique, but the sanitation challenges that residents face are emblematic of sanitation and wastewater failures across the country. Rural communities in Alabama, Alaska, California, Kentucky, Louisiana, Michigan, Mississippi, the Navajo Nation, North Carolina, Ohio, Puerto Rico, Texas, Virginia, and West Virginia as well as other jurisdictions lack adequate sanitation, demonstrating that neglect and disregard for basic sanitation is a nation-wide problem with disproportionate harm for Black, Latinx, and indigenous communities.

The reality in the United States stands in stark contrast to human rights standards, which require that sanitation be available, safe, acceptable, affordable, and accessible on the basis of equality.
KEY CHALLENGES

INADEQUATE LAWS AND POLICIES: The Clean Water Act and the Safe Drinking Water Act mainly regulate water quality, with minimal attention to sanitation. Sanitation is largely governed by a complex patchwork of state, local, and tribal laws, which vary widely and often do not adequately address the needs of rural residents and on-site systems. Further, authority for implementation is often diffuse, making it difficult to understand where to turn to address inadequate sanitation. The fact that septic laws can impose civil and criminal penalties where systems are out of compliance presents a further barrier to residents reporting inadequate sanitation. Instead of enabling and supporting residents in improving access to sanitation, the regulatory framework imposes cumbersome requirements, and in a number of jurisdictions criminalizes non-compliance, fueling distrust in public officials.

INADEQUATE FUNDING TO MEET BASIC NEEDS OF RURAL COMMUNITIES AND HOUSEHOLDS: Complex administrative and approval processes make it difficult for small governments and unincorporated communities to receive wastewater infrastructure funding. State, local, and tribal laws and requirements can also restrict access to available funds. Community entities, non-profits, and individual homeowners often understand solutions best, yet they may be ineligible for existing federal funding. There is a further lack of transparency and participation of impacted individuals in developing the guidelines that determine funding.

LACK OF DATA ON WHO HAS ACCESS TO ADEQUATE SANITATION: While some information is available for particular jurisdictions, comprehensive national data has not been collected for several decades, and data that is available is difficult to parse. Yet, the existing information on access to sanitation illustrates disparities along racial, ethnic, geographic, and socio-economic lines.

RECOMMENDATIONS

RECOGNIZE THE PROBLEM
Recognize that lack of access to sanitation impacts communities nationwide and requires federal guidance, as well as increased collaboration with state, tribal, and local governments to ensure solutions are tailored to local contexts.

ENSURE PARTICIPATION
Ensure meaningful participation in the creation and implementation of sanitation laws, policies, and programs by communities most impacted by lack of access to sanitation acknowledging their expertise and specific needs.

STOP CRIMINALIZATION
Eliminate laws that penalize and criminalize the failure to comply with sanitation regulations when cost and/or lack of ability to attain or install functioning wastewater systems are the barrier to compliance.

ENSURE ACCESS ON THE BASIS OF EQUALITY
Take steps to ensure adequate, affordable sanitation systems regardless of race, ethnicity, national origin, socio-economic status, or location.

- Develop a national standard for the cost of sanitation systems that is affordable for all. Work with state and local authorities to ensure it is met.
- Prioritize allocation of resources to marginalized individuals and communities.
- Support research into context-specific solutions that benefit small-scale providers and households. Ensure administrative requirements do not put an undue burden on small communities or individuals.

- Ensure regular, systematic collection and dissemination of disaggregated data on access to sanitation systems and services.
- Monitor and assess the functionality of existing sanitation systems and the effectiveness of laws, policies, and programs to ensure the right to sanitation on the basis of equality.
- Assess flow of resources continually to ensure resources support effective sanitation solutions in accordance with local needs, and make information publicly accessible.
- Improve access to information regarding who is responsible for permitting, regulation, installation, and maintenance of on-site systems and municipal systems.