



Increasing Access to Water, Sanitation and Hygiene (WASH) in the United States

Impact Report



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Staff member from DigDeep filling a water cistern in the Navajo Nation.

EXECUTIVE SUMMARY

In 2023, the CDC Foundation launched a novel, one-year program that aimed to direct funding to community-based organizations (CBOs) in the United States (U.S.) working on domestic water, sanitation, and hygiene (WASH) challenges in communities that were heavily impacted by a lack of safe water, sanitation or hygiene infrastructure. The program sought to both address immediate WASH challenges in communities across the country and increase CBO capacity to address longer-term WASH needs. The funding was dispersed across seven project sites, managed by six different CBOs. The selected organizations served culturally, ethnically, and geographically diverse communities. The program's project sites reflected the variety and complexity of WASH challenges across the U.S., including chemical environmental contamination, nonexistent water connections, neglected and underfunded water and sanitation infrastructure that no longer functions properly and barriers to proper hygiene faced by low-income households and people who are unstably housed.



One of DigDeep's water truck drivers explains the process to refill the cisterns.

CDC Foundation partnered with CBOs that mostly had operations already in place, expediting the time to project launch at each site. CBOs developed their own community-specific project plans and proposed activities, which yielded seven unique and tailored projects. Thematically, all projects could be focused on at least one of three areas of work: (1) technical implementation, (2) advocacy and (3) outreach and education. Over the course of the project year, nearly **36,000** individuals received some sort of technical component, whether a home water filter, water system or comprehensive hygiene kit. In the case of some project sites, this was the first time running water had been available in the home of community members. Almost **50,000** individuals received WASH educational materials, and community members also had the opportunity to engage directly with CBOs at public events. CBOs also focused on building local coalitions and partnerships for long-term interventions, with sites reporting **80** new partnerships established during the project period. CBOs also assisted communities in engaging with public leaders and government representatives.



Appalachia Water Project installing a water line at a residence.

While the primary purpose is always to serve communities in need, CDC Foundation also saw an opportunity to use this program to evaluate the CBO model of program implementation in order to learn more about and improve upon this model. CBOs and local players have important roles to play in public health interventions as they are often trusted sources and community experts. The evaluation looks at factors that CBOs highlight as needs and areas of support, community opinion and engagement and the outputs of CBOs over the course of the project period.

Increasing Access to WASH Through CBO Partnerships



WASH in the United States is a varied and complex landscape. As evidenced by the completed projects funded by CDC Foundation's "Increasing Access to Water, Sanitation and Hygiene" program the safe water challenges that communities across the U.S. face range from basic water access to failing sanitation systems, to environmental chemical contaminations and exposures. Therefore, WASH in the U.S. is impossible to distill into a one-size-fits-all approach. What makes this work additionally challenging in a highly developed country like the U.S. is a combination of factors that include lack of awareness of the problem due showing:

- **Nearly two million people in the U.S. lack running water²**
- **There is a historical lack of funding to address non-existent or aging infrastructure³**
- **Remoteness of certain communities that have clean water needs (physical and cultural remoteness are both to be considered)**
- **Longstanding structural and political systems that do not prioritize the needs of all people living in municipalities, watersheds or service areas**

Recognizing the power that CBOs have in engaging, serving and mobilizing their communities, and given previous successes in partnering with CBOs for public health initiatives, CDC Foundation sought to partner in this project with organizations that were active in their communities, had existing operations, and played strong roles in connecting community members to services. The backgrounds and missions of the partner CBOs varied greatly, with some having extensive experience in water and sanitation and others having none. The backgrounds of the CBOs before partnering with CDC Foundation on this project included policy advocacy, social justice, provision of emergency supplies, health promotion and outreach, and water and sanitation project implementation. These skill sets, combined with the established community trust and engagement that each organization brought to the table, were key in quickly deploying individual projects that met immediate community WASH needs while simultaneously developing foundations for long-term, sustainable progress.

¹United Nations Children's Fund and World Health Organization. WHO/UNICEF JMP household WASH data. 2022. Available at: <https://washdata.org/data/household#/dashboard/new>. Accessed March 11, 2024

²Close the water gap – DIGDEEP [Internet]. DIGDEEP. Available from: <https://www.digdeep.org/close-the-water-gap>

³House, W. (2024, February 20). FACT SHEET: Biden-Harris administration announces nearly \$6 billion for clean drinking water and wastewater infrastructure as part of Investing in America Tour. The White House. <https://www.whitehouse.gov/briefing-room/statements-releases/2024/02/20/fact-sheet-biden-harris-administration-announces-nearly-6-billion-for-clean-drinking-water-and-wastewater-infrastructure-as-part-of-investing-in-america-tour/>

It was well understood from the outset that a one-year funding cycle is a short time frame in the fields of public health and development, so CDC Foundation established four program outcomes that aimed to support short- and medium-term goals for each funded partner.

Program Outcome 1: Increase awareness of WASH challenges and related illnesses, particularly among local governments/municipalities and marginalized populations, within affected communities.

Program Outcome 2: Increase access to safe water and wastewater services (and other hygiene interventions) which will in turn reduce the burden of diseases that results from poor water and wastewater service in marginalized communities.

Program Outcome 3: Strengthen relationships between health department, private sector and CBOs to more effectively address systemic WASH challenges.

Program Outcome 4: Expand capacity of CBOs to address WASH challenges in their respective communities.

The intent behind these goals was multi-factorial. Serving communities' immediate WASH needs was a primary goal, but establishing a strong base for partnered CBOs to expand their capacity in this area and continue WASH efforts in the longer-term after this funding ends was equally important. WASH is not a quick fix, especially considering the expense and technical knowledge needed for many water and sanitation systems to be installed. Also understanding that some CBOs had not worked in WASH much or at all prior to the project start, CDC Foundation aimed to provide CBOs with scientific support throughout the project period to bridge any knowledge gaps. Lastly, many components of this program have either inherently or organically followed a trust-based approach, starting with allowing project sites to dictate their own project plans and activities with wide latitude. CBOs have local community insight that funders and administrative institutions can engage with. While key [trust-based principles](#) may vary slightly across organizations that advocate for this approach, the overall goal is to foster a collaborative effort that allows nonprofits and CBOs to implement projects that serve their community without funders dictating specific project activities while still meaningfully supporting the work of the CBO in other non-financial ways.

This program reflected a strong effort to embrace these principles, like having WASH and monitoring and evaluation (M&E) professionals available, not limiting funding in a restrictive way, and providing capacity-building trainings and opportunities for CBO staff. While incorporating this model is iterative and ever evolving, this program proved an interesting and successful test case for others that are moving in this direction of implementation.

CBOs have local community insight that funders and administrative institutions can engage with.

Funded Initiatives Across the U.S.

The CBO partners for this project spanned the United States, crossing multiple environments, cultures, and population centers. Six individual organizations managed the seven project sites (See Figure 1). All organizations had local teams leading initiatives on the ground and within



Figure 1. Map of CBO partners across the USA

the specific community context. Given the unique projects with varied activities, each project activity was summarized into one of three thematic buckets (See Figure 2).

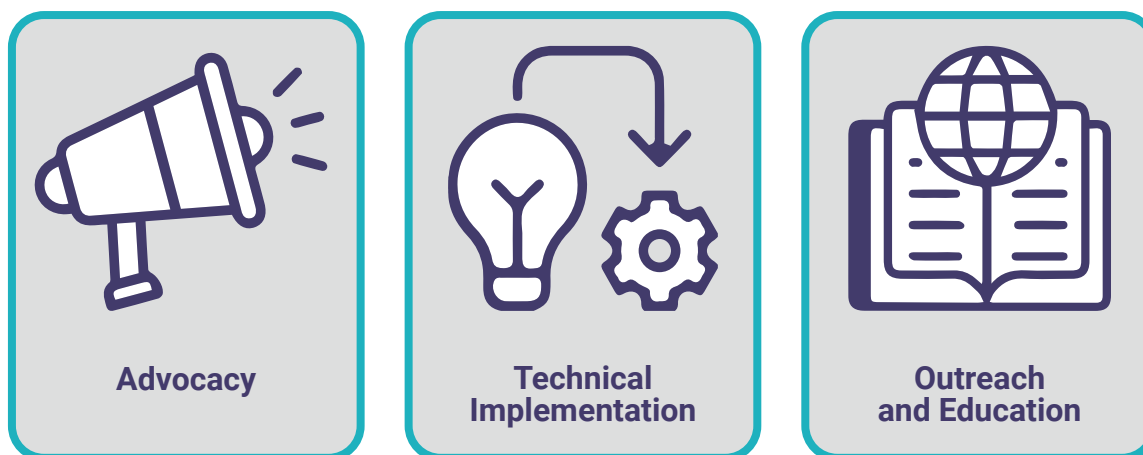


Figure 2. Three thematic buckets

El Sol Neighborhood Education Center, Adelanto, California

El Sol's project worked across all three thematic areas to provide WASH education to community members via community health workers (CHWs) who were also members of the impacted communities in Adelanto. Given the long-term contamination of the area's local water sources due to its proximity to the George Air Force Base Superfund site, El Sol used a multi-pronged approach across all three thematic areas to provide water testing, point-of-use water filters and water through kiosks to residents to ease the acute need for clean water while also assisting and teaching community members to engage with local politicians and other decision-makers to advocate for improved clean water access.



Navajo Water Project, Navajo Nation Appalachian Water Project, West Virginia

Managed by DigDeep, an organization specializing in large-scale installations or renovations of home water systems and piped water infrastructure, these two projects were implemented by respective teams in each community and coordinated from DigDeep's central team. The organization has special emphasis on utilizing local teams for community installations. As the organization is highly skilled in these types of engineering and installation projects, their activities for this program were focused on water access infrastructure, so these two projects fit in the technical implementation thematic area. In the Navajo Nation, teams installed solar-powered home water systems and coordinated the transport of water via trucks to the homes of Nation residents. Additional work done by DigDeep on this project includes skills building among Nation members related to plumbing and maintenance of the installed systems. In Appalachia, work was focused on connecting or renovating connections to homes from municipal water main lines. With funding from this grant, many homes in these two project areas were able to have running water for the first time.



People's Advocacy Institute, Jackson, Mississippi

After facing some delays in acquiring water filters, People's Advocacy Institute (PAI) was able to quickly deploy filters to homes as planned during the project period. They worked across advocacy and technical implementation throughout the life of the grant, using this one-time funding to make capital purchases of filters to address acute needs and to continue to build on their pre-existing advocacy work in the Jackson community. PAI's previously established work with their People's Assembly was used to advocate for improved municipal water and as a forum with government decision makers and will continue to build on this over the long term as Jackson works towards municipal water improvements.





People's Advocacy Institute member installing a water filtration device at a residence in Jackson, Mississippi.

West Central Alabama Community Health Improvement League, Black Belt of Southwest Alabama

West Central Alabama Community Health Improvement League (WCACHIL) focused their activities during this funding cycle on building the community capacity for advocacy across rural communities that experience chronic poverty and have suffered from structural racism and lack of government assistance and funding for decades. Their work was aimed at galvanizing community engagement through focus groups, workshops and tabling events. They also spoke with local leaders about WASH, particularly the need for improved sanitation, on behalf of the community. They also distributed hygiene supplies to households with acute needs. Although the organization has had a long partnership with the University of Alabama at Birmingham and has implemented health programming for other initiatives in the past, WASH was a new sector for them and one where they will continue to grow and engage the community after the program funding ends. Their work also fell into the advocacy and outreach and education arenas.



The Black Belt Unincorporated Wastewater Program and PEER Consultants, Lowndes County, Alabama

During this funding cycle, The Black Belt Unincorporated Wastewater Program (BBUWP) and PEER aimed to simultaneously build organizational capacity of BBUWP, a newer CBO in a high-need area of Alabama, and assess needs of the local community in order to set a mission and goals for the future work of the CBO as it relates to critical needs for improved sanitation across the Black Belt. BBUWP and PEER have worked to establish organizational capacity of BBUWP, to build a local coalition of residents to advocate for improved WASH in the area, and worked towards establishing longer-term funding, processes and technical support for installing new or renewed wastewater systems. Their work supported by this grant fits into the advocacy and outreach and education thematic areas.



Community Resource Center, *Nashville and Middle Tennessee*

Community Resource Center (CRC) worked on WASH through a unique lens; their history of serving people experiencing homelessness or unstable housing meant that they understood WASH through a context that is sometimes easy to forget. They opted to focus exclusively on hygiene, which can sometimes get lost among the water and sanitation components. CRC worked across two thematic areas of technical implementation and outreach and education to provide hygiene kits and hygiene materials to area residents who were experiencing difficulties in purchasing these products independently.



Community Resource Center members collecting and managing hygiene products for distribution to residents.

Program Outputs and Results

Program success can be measured in both outputs and outcomes, depending on the questions being asked, the measures of success defined by the grantee or community, and the stage of implementation. Program outputs are the direct results of activities conducted by the grantee, and in some cases directly feed the measure of success for defined program outcomes. However, outcomes typically measure some sort of change and impact over time. Some of the outputs do directly measure progress towards certain outcomes. Activities and their corresponding outputs in any program such as this one ideally lead to the sustainable, community level changes that programs aim to make (the outcomes). Table 1 below tallies and summarizes the key short- and medium-term products, or outputs, of each individual project site and collectively across thematic areas, highlighting the work done by the projects and progress towards those expected sustainable community changes. Differences in numbers of people served should be considered in the context of cost and time of implementation of a specific intervention as there are very large differences in these factors across project sites.

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Table 1. Key project outputs and successes attributable to CDC Foundation funding across sites for the increasing access to WASH program

Site	Thematic Areas		
	Technical Implementation	Advocacy	Outreach and Education
BBUWP and PEER, Alabama Black Belt	80 onsite wastewater systems installed, 75 approved applications in progress	Published 2 success stories for WASH advocacy, 1 academic research paper, created a roadmap and guidebook for future CBOs to replicate, developed 35 new partnerships, connected with 32 local and 13 federal leaders for WASH advocacy	Developed a "high-level" community outreach and stakeholder engagement program and participated in 22 events for 90 people, held 24 focus groups for 73 people, 14 workshops for 115 people and reached 750 people with WASH education materials
CRC, Middle Tennessee	Distributed hygiene kits to 28,719 people across service area	Developed 17 new partnerships, connected with 60 local and 12 state or federal leaders and shared 34 stories for WASH advocacy	28,719 people who received hygiene kits also received WASH educational materials
DigDeep – The Appalachia Water Project, West Virginia	25 new household connections for 47 people	N/A	21 households received WASH educational materials
DigDeep – The Navajo Water Project, Navajo Nation	Outputs excluded in consideration of data privacy and respect for tribal sovereignty and ownership of this data.		
El Sol Neighborhood Educational Center, Adelanto, CA	341 household water filters distributed bringing filtered water to 1,334 people	Developed 5 new partnerships, connected with 7 local and 10 state or federal leaders and shared 10 stories publicly for WASH advocacy	Participated in 15 total events for 2,805 people and 2,310 people reached with WASH educational materials
PAI, Jackson, MS	1,000 household water filters distributed ¹ across service area	Developed 23 new partnerships, connected with 20 local and 5 federal leaders and shared 7 stories for WASH advocacy	Participated in 7 events for 520 people, held 5 focus groups, and reached 4,500 people with WASH educational materials
WCACHIL, Alabama Black Belt	4,706 people received hygiene supplies	Connected with 13 local and 7 state or federal leaders, and shared 4 stories for WASH advocacy	Participated in 85 events to reach 5,975 people, held 15 workshops for 310 people and reached 8,500 people with WASH educational materials
Total Approximate # People Reached^{5,6}	35,961 people²	180 people³	49,668 people⁴

²The number of people in the household can sometimes be difficult to count, so some of these numbers are likely underestimates for individuals in the household.

³This number does not include those estimated to have been reached with successful marketing and story sharing through media since this number would be very difficult to estimate. It includes the count of leaders CBOs connected with over the course of the project.

⁴This number includes only the people reached with educational materials to avoid potential double-counting people who attended events and received materials. These two are not mutually exclusive.

⁵The approximate number of people reached. These estimates are not representative of the total number of people reached by CBOs during the project period, but rather, the estimated number of people reached that is attributable to the funding provided by CDC Foundation.

⁶The totals here do not reflect the accomplishments of The Navajo Water Project, as these have been omitted in consideration of data privacy and respect for tribal sovereignty and ownership of this data.

Project sites were collectively very productive in driving the overall program towards the intended outcomes. With approximately **2,874** people served with a new means of accessing clean water and **33,425** people receiving critical hygiene supplies, progress towards outcome two was strong by activity and output counts alone. With over **44,700** people in affected communities receiving WASH education materials and even more being reached through community engagement events, workshops or focus groups, progress towards outcome one is also strong by considering only the outputs, but equally important with these is the ability of the CBO to engage with residents and continue to build awareness and trust. Outcomes three and four are informed by several factors, including the **80** reported new partnerships developed across sites. The outputs above related to advocacy and outreach combine to lay the groundwork for seeing evidence of outcomes three and four becoming a reality although progress towards these will best be assessed with additional methodology and will be reported in the evaluation report. While the broader evaluation assesses other things to consider for each outcome, the scope and quantity of these outputs over the course of one year is impressive, especially in the context of how technically and environmentally challenging and expensive some of these solutions can be.

“

The [Project] team has continued developing deeper relationships with communities that go beyond connections to water and sewer lines. For every community and household we work with, our team takes stock of their overall wellbeing and of any circumstances that may threaten their ability to continue accessing safe water and sanitation services in the long term. – Site Leader

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2,874

people served with a new means of accessing clean water



33,425

people receiving critical hygiene supplies



44,700

people in affected communities receiving WASH education materials



80

reported new partnerships developed across sites

SUCCESSSES AND CHALLENGES



The respective successes and challenges were as varied as the individual projects, which called for nimbleness on the funding or administrative agency to both act as a sounding board for myriad potential solutions and as a subject matter expert for a wide range of needs. Some projects quickly implemented and achieved their stated activities and objectives, sometimes completing projects ahead of schedule. Others experienced delays in receiving materials or some road bumps working with local or other government actors. Others adapted to address barriers to implementing program activities that were both within their control, like staffing, and outside of their control, like extreme weather.

“

The partnerships that are beginning to develop. I really think the people and organizations I have been able to connect with on this project are going to be integral relationships that help everyone in our community move forward and thrive. – Site Leader

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While any public health campaign that aims to improve large systems will face significant barriers to change, the CBOs also had plenty to share in the way of successes, with some universal successes and challenges across sites, described on the following pages.



DigDeep installs a home water system for a family in the Navajo Nation.

Common Successes

Building and/or capitalizing on partnerships

- This was a theme across all sites, whether explicitly reported as a success or not. It was evident from project reporting that all sites worked with new and existing partners to achieve project goals.

Rapid scale-up of technical implementation due to pre-existing organizational or operational structures

- When working with CBOs or other organization, it is important to ensure they are ready to implement project goals. The sites exhibited the utility of this from the beginning of the grant period.

Strengthening WASH awareness and increasing action within communities

- Nearly all sites reported increased awareness of WASH needs and services and its importance among community members of all types, including government and other nonprofit structures. This is something important to note as one of the goals of the overall program was to lay the groundwork for longer-term and sustainable WASH initiatives.

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Reflecting on the outcomes of our project, we've encountered numerous successes that surpass our initial expectations. One success is the realization that the total need in our pantry locations far exceeds our original estimations.

– Site Leader

”



Community Resource Center members proudly displaying donations received for distribution to residents.

Common Challenges

Technology literacy and internet connectivity

- Most sites collected data in paper format due to a lack of internet access or lack of comfort using tablets or smartphones among community members, which makes it difficult and time-consuming to analyze data to share evidence of the work and value that CBOs bring to the table. Secondary issues resulting from this are the need to have trained survey enumerators assist in collecting data on paper from community members, since this process defaults to CBO staff assisting with paper surveys. Other issues included internet access and technology literacy as barriers to reaching communities with information, building trust in the information shared and tracking project information. As many of these communities are rural and/or lower-income, internet access and activities like online survey deployment will continue to need work arounds.

Sourcing and delivery of materials. Strengthening WASH awareness and increasing action within communities

- Several sites had delays in receiving deliveries or being able to order the necessary products at the right price and within the right timeframe. This shows the sometimes difficult nature of sourcing the required products that are within the budget for a project. Supply chain issues affect all sectors and are difficult to control, but CBOs were largely able to pivot and adjust when this became an issue. One CBO experienced challenges identifying appropriate sanitation systems for challenging soil types in one project area. The CBO continues to work towards a solution for this issue.

Extreme weather

- Weather was noted across several sites as reasons for delayed installations or a change in operations. Extreme rain, storms, heat, cold, and tornadoes all impacted some sites during the project period, although each one was able to adjust and complete project activities and goals despite having to adjust operations and schedules and some having to temporarily take on an emergency response role.



People's Advocacy Institute volunteers giving out water testing kits in Jackson, Mississippi.

Considerations for Future Work with CBO Partners



The CBO partners in the Increasing Access to WASH in the U.S. program had varied skills and organizational backgrounds and had unique interventions for their communities. As the landscape of public health and service provision evolves and CBOs hopefully play increasingly active roles in programming, it is important for funders to know and understand that not all CBOs are the same. Some will be highly technical, like a nonprofit clinic accustomed to strict regulations and certification procedures, and others will be grassroots organizations that focus on advocacy and community mobilization. It should be a priority for the funder and administrators to digest this and provide adequate support where it is needed. For example, a clinic may be more primed to send in electronic data, but they could use training in launching social media campaigns, and a grassroots organization may benefit from operational support that allows more focus to launch community engagement work. In assessing CBO needs early or even perhaps prior to awarding grants, it could be beneficial to know how to best support CBOs as the funding cycle begins. An observation from this program is that to set CBOs up for success a flexible funding structure and activities are needed. These changes will allow the CBOs to provide their communities with what they need most and when they need it.

Capacity-building for CBOs and Local Players

There are several areas of capacity-building that have come up during the project period, and that are particularly important in any context, but especially in WASH:

- 1. Scientific, technical and evidence-based initiatives**
- 2. Technology and software skills development**
- 3. Training provision for CBO staff across operational/management and/or community engagement domains**

These areas can even be considered for their own funding line during the grant application period for future WASH opportunities. The strengths and areas of support needed varied among CBOs, so it was important to allow for and anticipate bidirectional feedback and requests related to specific areas of need. Ideally, CBOs should feel free to request scientific and technical support, and some did make this request to the CDC Foundation project team throughout the grant period. Scientific and technical guidance was provided where possible, and connections to outside sources were made where possible. The CDC Foundation helped identify evidence-based practices that could be incorporated into grant work early in the program's launch and where data were available to support specific initiatives.

In future WASH opportunities, this should be discussed with the CBO as they define their project activities during the launch of a project. Open conversations to share data on proven methods, especially in WASH, creates a collaborative relationship where decision-making is driven by the CBO and supported by the administrator team with information and evidence-sharing

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We remain challenged by the latent issues that spring up in the course of rolling out in the various unincorporated zones. This is an underserved area that has very little practical implementation systems that are readily applicable or appropriate for the target audience. – Site Leader

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Funding Structures that Allow Flexibility and Empower Decision-Making

A key idea of trust-based philanthropy is that funding should be flexible and not have strict requirements or overly detailed expectations. While some guidelines are necessary, this CDC Foundation program allowed each site to identify its own problems and solutions. To create real change, especially in areas like WASH, it's essential to use the deep community knowledge of a CBO or other local group. This is easier to do when funding is flexible or unrestricted, as it's often hard to engage people and change behaviors with strict funding rules. The work done by the sites in this grant is evidence of the varied community needs within this one field, and it was a unanimous finding that more funding like the CDC Foundation grant they received would be helpful to keep pushing their work in WASH forward. Specifically, the flexibility in the funding and less strict reporting requirements were cited as major positive factors.



People's Advocacy Institute team member poses with a water filter that was given to a homeowner in Jackson, Mississippi.

Where Possible Reduce Administrative Burden

To engage smaller organizations, funders can reduce the administrative burden on CBOs during grant cycles. While reports and data are essential for tracking success and progress, funders should critically assess what information is necessary and what can be simplified or skipped. For example, a short survey might replace a lengthy quarterly report, and check-in calls should strike a balance between helpful and burdensome. CBOs often cited the ease of reporting for this grant, suggesting that reducing reporting requirements where possible can make grants more accessible. A notable example was hiring an M&E consultant to assist with tasks that would normally fall to CBOs, easing their workload.

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We have not passed out all the water filters yet, but we are continuing to contact residents and our Grounds Team goes out every weekday to neighborhoods.
– Site Leader

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As the value of CBOs is increasingly recognized, funders and large entities have a unique opportunity to create shared decision-making spaces. This involves fostering understanding, open dialogue and balancing power, allowing CBOs to propose their own activities while funders offer support as partners. Though this process may be challenging and require adjustments, it is critical for building an impactful public health system. Shifting away from traditional grant-making models when engaging CBOs as partners, as seen in this WASH program, is key to achieving sustainable public health goals in high-need communities.



A DigDeep staff member installs a home water system for a homeowner in the Navajo Nation.