



ENGINEERS
WITHOUT
BORDERS
USA

Power Through Partnership

2023 ANNUAL REPORT

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FROM THE EXECUTIVE FELLOW

Dedicated volunteers are the fuel for EWB-USA's engine.

I started like most of us did—somewhat disturbed by all the problems in the world and believing that one day I could solve a good chunk of them. So, I jumped straight into engineering at Georgia Tech. But underneath, I always felt it wouldn't be me—it couldn't be me solving these problems I care about. "I'll put in the work, I'll learn, I'll get up close, but I'm not good enough to really do it," I thought. So, I got as close to problems and problem-solvers as possible: I joined a research lab, took public health internships, and volunteered with Engineers Without Borders USA.

That last one? A surefire way to change your life.

My academics brought me close to the issues and taught theoretical solutions, but nothing took me as far as an EWB-USA project in Salima, Malawi. Mpitilira Primary School had dilapidated sanitation facilities—so unhygienic and unusable that they affected students' health and attendance. A place with real children and teachers, not unlike my community, suffering from a problem that couldn't

wait for money or better times ... **someone had to do something. So, at the school's invitation, our chapter did.** Within a year, two brand-new latrine blocks were constructed at Mpitilira. The process wasn't easy, perfect, or something I thought I'd ever be able to accomplish, but it happened.

There are a few reasons why—and they're the same reasons that make EWB-USA special:

1. EWB-USA offers many guides and resources, and our chapter was welcomed into a culture of learning and knowledge-sharing that ensures the quality of each project.
2. We received invaluable direction and correction from partnerships with local NGOs, experts, and other chapters.
3. The determination my team, like many other EWB-USA chapters, applied to our project secured its successful delivery. We believed it couldn't not be done well—and if we had gaps, we filled them through outstanding partnerships and resources.



Mpitilira's sanitation challenge is not the last critical problem I would encounter. In truth, housing and healthcare inequality here in the States and the restriction and destruction of civilian infrastructure in my parents' hometown of Gaza continually remind me that there is much left to do in the way of justice and equity. However, I will continue to remember this EWB-USA project as the first time I felt equipped to begin to help. *The truth is, none of us are really "good enough" to create solutions alone.* Yet, together as a network of partners, communities, staff, and volunteers, **we have the power** to tackle the profound challenges communities face today.

Thank you,

Lydia El-Sayegh
Executive Fellow, EWB-USA



LEARNING AND LEADING: ESET ALEMU'S JOURNEY

As a child growing up in Ethiopia, Eset Alemu would visit her grandma's small town of Debre Birhan. She fondly remembers attending community meetings together, where they'd learn about new infrastructure that was being built. She also remembers how much life improved when those projects—including electrification and a larger road—were complete.

"From an early age, I knew the difference basic infrastructure could make in the lives of everyday people," says Eset. She also knew she wanted to become an engineer.

Eset's educational journey eventually took her to Seattle, where she completed her graduate degree in civil engineering and

started her career. Early on, Eset noticed she was often the only woman engineer in the room during big meetings, and there weren't many woman engineers in senior roles. "It's not just about finding a mentor," she says. "It's about not seeing yourself reflected in the spaces around you."

But that wasn't the case at Engineers Without Borders USA. Wanting to improve life in communities like her grandma's, Eset had begun volunteering with the Puget Sound Professional Chapter. What she found was the supportive environment she had been looking for. "I did find that mentorship, and I felt empowered to ask questions and take the lead," she says. **"It's a place where a young woman engineer can build skills and community, and navigate the industry."**

Within her chapter, Eset served as fundraising chair, engagement manager, and president. As her chapter's Nicaragua program lead for seven years, she worked on projects to develop a rural water supply, and to create a coffee-processing facility with a wastewater treatment system. She even facilitated community meetings like those she grew up attending with her grandma.

Now serving on the EWB-USA board of directors, Eset is using her professional

and volunteer experience to help guide the organization and maximize its impact. As a woman engineer, a mentor, and a leader within EWB-USA and in her industry, she is someone young woman engineers can see themselves reflected in.

"If it was a different turn of fate, I'd be serving my own country as an engineer," says Eset. "For me, it's important to do what I can for the people who don't have the fortune to access basic services. **There's a bigger world out there we can build and grow.**" ●



"Engineers Without Borders USA is a place where a young woman engineer can go to build skills and community, and navigate the industry."

—
Eset Alemu
Past Board President, EWB-USA

Leading the Industry

43%
of volunteers with
EWB-USA identify as women

15%
of engineers in the
U.S. identify as women

“Where the Need Is” Putting Communities First at Engineers Without Borders East Africa

As young children in the town of Kisoro in southwest Uganda, Peter Nzabanita and his siblings often walked several miles to fetch water before school. “It was horrible,” he says. When it rained, they’d dig pits or use Matoke banana leaves to collect water, often getting sick because it wasn’t treated. “We did not know who would help solve this problem.”

It turned out Peter himself would. He began studying engineering in his late teens—and one of his first projects was helping build a pipeline to bring water to his town. In the years that followed, he continued his educational and professional journey, focusing on water, sanitation, and hygiene (WASH) services in Uganda. He noticed a frequent problem with development projects—a top-down, outside-in approach that didn’t start with what a community truly needed. “There’s a tendency for an organization to think they’ll develop the community, rather than setting the community up to develop themselves,” he says.

Then, four years ago, Peter joined EWB East Africa (formerly EWB-USA, Uganda Country Office) as an engineering services program manager in Uganda. “It took me back to where the need is,” he says. **EWB-EA takes the time to learn from a community and its partners, assess their needs, and monitor each project’s impact.** “We also build on

the local knowledge—the local perspective and understanding,” Peter says. Giving the community a sense of ownership is critical to long-term sustainability, he adds, because every project must come to an end.

Peter became executive director of EWB-EA in 2022, and the organization leads with a strong understanding of communities and community-based organizations to help ensure that projects succeed. A few EWB-EA projects, in partnership with EWB-USA, stand out to him: Constructing a cable bridge that spans a river, connecting a town to a hospital on the other side. Bringing piped water and sanitation access to two healthcare facilities. And building a school for more than 500 children in a rural area where there had been no school at all.

“We are touching communities that need us, that need services probably more than you can ever imagine,” says Peter. “The connection and the patience we have, has really strengthened us—and we see results.” ●

“We are touching communities that need us, that need services probably more than you can ever imagine. The connection and the patience we have, has really strengthened us—and we see results.”

—
Peter Nzabanita
Executive Director, EWB-EA



PARTNER HIGHLIGHT: AMAZON PROMISE

At Engineers Without Borders USA, we know the scope of our impact would only be possible with the power of our partnerships. Our collaboration with partners like Amazon Promise creates the foundation for the pillars of the EWB-USA model. Amazon Promise began with a transformative encounter with its founder, Patty, who met local guide and translator Jose in the early 1990s and witnessed firsthand the preventable death of a young girl. Patty and Jose were moved to action, creating Amazon Promise to address the

critical health needs of remote Amazonian communities.

For over three decades, Amazon Promise has fostered long-term relationships with communities, particularly those in Peru near Iquitos and Nauta, and in remote areas near the borders of Brazil and Ecuador. Indigenous communities like these often lack government support, making the work of Amazon Promise and EWB-USA

crucial. Through our ongoing partnership, Amazon Promise has witnessed significant improvements in the quality of life for many communities, particularly a notable decrease in water-related health issues, thanks to our collaborative projects.

Since 2013, EWB-USA and Amazon Promise have partnered on over 20 active and completed projects. These projects have led to numerous improvements to the quality of life for residents, including savings on medicine costs and more time for families to engage in income-generating activities, thereby improving their economic conditions.

Amazon Promise's deep connection and trust within communities are evident in the high satisfaction rates and the robust presence of community-based organizations (CBOs) that manage and maintain the projects.

The organization's work has

improved health outcomes by providing numerous essential health services such as oral care and medical support, especially for women and children.

As climate change impacts the Amazon region with hotter temperatures, unpredictable precipitation, and severe erosion, the partnership between EWB-USA and Amazon Promise becomes even more critical. Together, we are addressing the provision of essential health services and the construction of basic infrastructure such as clean water systems.

Our collective impact contributes to healthy and empowered communities. Amazon Promise embodies the spirit of collaboration we value at EWB-USA. Amazon Promise's unwavering dedication and profound impact on the communities they serve inspires us all. Through such partnerships, we can achieve lasting change and strengthen communities worldwide. ●



An Educational Transformation in Río Azul, Guatemala

Tucked in the lush green mountains of Guatemala's Western Highlands, the town of Río Azul had a problem. "The primary school was supporting secondary kids," says Engineers Without Borders USA Senior Program Manager Gretchen Smithwick. "Space was tight, they were having to shuffle schedules around, and kids were spending less time in school. It wasn't a healthy learning environment."

Poverty and lack of economic opportunity are driving forces in high rates of emigration from Guatemala. "Many people are

leaving, especially in small Indigenous communities like Río Azul," says Gretchen. At a time like this, education and vocational training couldn't be more important.

With the need clear, the community reached out to EWB-USA for help building a new school. Through partnership with the Río Azul community—and local NGO partner ACCMARI, Rotary Club, and ISF Guatemala—the Minnesota Professional Chapter of EWB-USA helped build a high school that includes five classrooms, a kitchen, bathrooms,

and an office, completing it in 2022. Though that was just phase one—phase two will add two classrooms and a sport court—students didn't want to wait. After they saw the potential opportunities the completed infrastructure could offer the community, says Gretchen, "students advocated to move into the school before the second phase was completed." And the community listened. Soon after opening its doors to students, Río Azul High School won a grant from a local foundation and the government, securing funding for two marimbas—the national instrument of Guatemala. With the extra space now available, the school has devoted one of its classrooms to a music program. "Students talk about it as a celebration of their culture," says Gretchen, whose role includes learning from communities about the impact of EWB-USA projects.

"EWB-USA supported the infrastructure needs, but the community created the opportunities. **It's a model school now.**"

—
Gretchen Smithwick
Senior Program Manager, EWB-USA

The new school is also home to a program that prepares students for the electrical trade.

Today, students and teachers alike report better mental and emotional health and an improved educational experience. Students speak of increasing confidence and the excitement of coming to school—and of how they're planning to stay in their

community because of the opportunities their new school offers.

"EWB-USA supported the infrastructure needs, but the community created the opportunities," says Gretchen. "Government officials are visiting and trying to replicate and expand it elsewhere—it's a model school now." ●





Building Resilience to Changing Climates

Chief Engineer Gerard Dalziel reflects on engineers' role in climate adaptation

A month after Hurricane Maria ravaged the island nation of Dominica, I was staring at the stars through what used to be the roof of the hallway of my hotel. I was there as part of the Engineers Without Borders USA disaster recovery team, working with the people of Dominica to rebuild their lives. Earlier that day, one of our volunteers and I had been advising homeowners on how to repair their homes while other team members were working with the government to build resilience into government facilities.

Hurricane Maria left 31 people dead and 37 missing on the island, and damaged or destroyed more than 90% of homes and businesses. The hurricane also disrupted power and water supplies and destroyed the entire season's crops. Many citizens moved away, losing hope for a future on the island.

Amidst this and other climate catastrophes, **our organization has recognized the urgent need to address climate change resilience.** By 2019, we mandated all project teams to

integrate climate considerations into their designs. In 2022, we embarked on a crucial journey, revisiting 39 partner communities to witness firsthand the impacts of climate change. The testimonies highlighted three overarching challenges: unpredictable weather patterns, escalating temperatures creating a hotter and drier environment, and intensifying storms.

Armed with this insight, we dedicated 2023 to developing an enhanced methodology for climate-resilient project design. Our research delved into key variables such as annual rainfall, temperature fluctuations, desertification, and sea-level rise. This data informed a comprehensive framework ensuring that infrastructure in our partner communities would withstand future climate shocks for the next few decades.

This year, our focus shifts to piloting this new methodology and conducting extensive training on climate resilience.

We are committed to supporting our communities, partners, and volunteers with the knowledge and skills necessary to navigate the challenges posed by climate change. With this new methodology, our partner communities will know that what is built in their community will be able to withstand future climate shocks for the next 20 to 40 years.

EWB-USA's climate work supports communities like Dominica, helping those who have contributed the least to climate change but feel its devastation so intensely. We strive to create resilient infrastructure that endures the impacts of a changing climate, ensuring a safer and more sustainable future for the most vulnerable populations.

Thank you.

Gerard Dalziel
Chief Engineer, EWB-USA

Community Engineering Corps Celebrating 10 Years of Service



For a decade, Community Engineering Corps (CECorps) has been delivering impact. Partnering with communities across the United States and territories directly affected by infrastructure injustices, **CECorps is crucial in helping communities access federal, state, and local funding, ensuring that those most impacted by climate change, environmental inequity, or failing infrastructure can access resilient and sustainable engineering solutions.**

Since its inception in 2014, CECorps has successfully completed 87 projects nationwide in sectors such as sanitation, drinking water supply, agriculture, structural, stormwater, roadway, site development, and energy. These efforts have unlocked millions of dollars in essential funding, resulting in critical infrastructure improvements for communities that lack access to and cannot afford traditional engineering services.

CECorps leverages a robust volunteer network of over 200,000 professionals and students to deliver expertise to underserved

communities nationwide. In recent years, the program's mission was further bolstered by significant federal investments through the Bipartisan Infrastructure Law, the Inflation Reduction Act, and the Justice40 Initiative, infusing renewed energy and optimism into its efforts.

This year, new partnerships with the EPA's Environmental Finance Centers (through the U.S. Water Alliance) and the Environmental Justice Thriving Communities Technical Assistance Centers in four regions have enhanced CECorps' capacity to partner with more communities and fellow community-based organizations. These collaborations and ongoing work with the United States Department of Agriculture on rural water and wastewater initiatives highlight the importance of collective efforts in driving meaningful change.

As the program grows, CECorps continues to address needs and make an impact. As one community client, representing a



nonprofit whose mission is to increase food access and security in her neighborhood, said: "Through discussions and on-site observation of the work, we knew we were getting expert services and experts working to resolve problems ... Volunteers were eager to work, followed instructions and



directions, and worked many hours and days on the project. The group was professional, listened to our needs, and kept us informed of progress and delays. We now consider some of them family.”

As CECorps celebrates its 10 years of service, the positive feedback from clients and volunteers alike highlights its profound impact. “Volunteering with CECorps as a student offered me a unique ability to be exposed to the inner workings of engineering work, demonstrating aspects that I would not have been privy to from my formal education alone,” said one student volunteer. “This team and project have really impacted me positively. The amount of impact this

project will have on the community is crazy in my mind. It’s truly inspiring,” said Aaron Lopez with Hope Dental Clinic. Aaron is a professional volunteer who offers his expertise pro bono for a community client’s project providing access to affordable and accessible dental services. These sentiments capture the professional and personal growth experienced by volunteers. From ensuring that communities have access to clean water and healthy food, to reconnecting families with safe roads, to equipping those most vulnerable to disaster with the tools to weather the next storm, CECorps has profoundly impacted communities and volunteers in its 10 years of service.

With a decade of impactful work behind it and a quickly growing need for project support, **CECorps continues to build stronger, more resilient communities through engineering, partnership, and an unwavering commitment to environmental justice.** Together, CECorps is building a future where every community has the resources to access the infrastructure it needs to thrive.

CECorps is a partnership program of Engineers Without Borders USA, American Water Works Association, and the American Society of Civil Engineers. ●





ENGINEERS WITHOUT BORDERS USA

2023 HIGHLIGHTS

6,221

STUDENT VOLUNTEERS

155

STUDENT CHAPTERS

186,753

2023 BENEFICIARIES

29

COUNTRIES

3,779

PROFESSIONAL VOLUNTEERS

73

PROFESSIONAL CHAPTERS

5,019,602

BENEFICIARIES SINCE 2002

24

U.S. STATES AND TERRITORIES



PROJECTS

387

ACTIVE

75

COMPLETED

AGRICULTURE

28 active – **14** complete

SANITATION

49 active – **10** complete

CLIMATE RESILIENCE

19 active – **14** complete

CIVIL WORKS

24 active – **1** complete

STRUCTURES

49 active – **10** complete

SCHOOLS

81 active – **12** complete

ENERGY

19 active – **1** complete

WATER

216 active – **39** complete

HEALTHCARE FACILITIES

9 active – **7** complete



STUDENT SPOTLIGHT

Joss Bhuiyan, Texas A&M University

A newly awarded Bachelor of Science in mechanical engineering and ascending graduate student at Texas A&M University, Joss Bhuiyan has been integral to his campus EWB-USA chapter over the past five semesters. Joss served as a sub-team lead and later as project lead for projects in Rwanda and Arkansas. His role in a solar power initiative for a project led to a job offer in solar power system design, blending his practical experience with professional aspirations.

Joss' most impactful experience was in Rwanda. While there, Joss translated and compiled survey answers from local residents about the benefits of latrines and engaged with Isaac Hatangimana from Integrated Development Action Rwanda, gaining profound insights into the local culture and the importance of sustainable practices.

"Monitoring the construction of the latrines and trying to keep the costs down meant so much more once I knew how much it

meant to their way of life," says Joss. This experience deepened Joss' commitment to humanitarian engineering, influencing his career goals to obtain a P.E. license and mentor future EWB-USA chapters.

Joss reflects, **"While participating in EWB-USA, I felt a true purpose in my time and work as an engineer and I cannot imagine not continuing to try and be part of it in the future."** ●

"While participating in EWB-USA, I felt a true purpose in my time and work as an engineer and I cannot imagine not continuing to try and be part of it in the future."

—
Joss Bhuiyan
Texas A&M University

Experience in helping people with different qualities of life is crucial in humanitarian engineering. Understanding the lives of others based on their environment, surroundings, and culture is necessary to execute a successful project design.



Our Commitment to Sustainable Development



At Engineers Without Borders USA, **our mission is deeply intertwined with advancing the United Nations Sustainable Development Goals (SDGs)**. These goals represent a global blueprint for achieving a better and more sustainable future for all. Our projects are designed to address the root causes of poverty, inequality, and climate change while ensuring communities thrive through sustainable and resilient infrastructure. Below, we outline our commitment to eight SDGs that fall within the scope of our work:

SDG 1: No Poverty

We work to eliminate poverty by providing essential infrastructure and services that enhance economic stability and growth in underserved communities.

SDG 2: Zero Hunger

Our agricultural projects improve food security by promoting sustainable farming techniques and drought-resistant crops, helping communities adapt to climate change and maintain reliable food sources.

SDG 3: Good Health and Well-Being

We focus on projects that enhance the health and well-being of communities. This includes building clean water systems, improving sanitation, and building footbridges to provide increased access to healthcare facilities, which are crucial for preventing disease and promoting overall health.

SDG 4: Quality Education

EWB-USA supports educational infrastructure projects, building schools and providing resources to ensure access to lifelong learning opportunities for all community members.

SDG 6: Clean Water and Sanitation

Access to clean water and adequate sanitation is a human right and critical to sustainable development. Over 60% of our projects involve water access and safe, reliable, and sustainable water supply systems to communities, reducing water-borne diseases and improving public health.

SDG 7: Affordable and Clean Energy

Our clean energy projects, including solar power installations and energy-efficient cook stoves, help communities reduce fossil fuel dependence, lower energy costs, and mitigate environmental impacts.

SDG 8: Decent Work and Economic Growth

We create economic opportunities by developing infrastructure that supports local economies, such as market access roads and improved agricultural productivity, and a boon in economic growth.

SDG 9: Industry, Innovation, and Infrastructure

We build resilient infrastructure to promote sustainable industry and foster innovation, using advanced engineering practices tailored to community needs.

Sustainable Development Goals **Impact Numbers**

Additionally, we uphold the values of SDG 5: Gender Equality and SDG 13: Climate Action in all our projects. Gender equality is promoted through active participation and leadership of women, while our climate initiatives focus on building climate-resilient infrastructure and educating communities on sustainable practices.

EWB-USA is committed to joining many others in working toward achieving the SDGs. We recognize that sustainable development requires a comprehensive approach to addressing social, economic, and environmental challenges, ensuring that all communities can thrive.

SDG 1: No Poverty

5M+ lifetime beneficiaries
183K+ in 2023

SDG 2: Zero Hunger

325K+ lifetime beneficiaries
9K+ in 2023

SDG 3: Good Health and Well-Being

1.7M+ lifetime beneficiaries
100K+ in 2023

SDG 4: Quality Education

209K+ lifetime beneficiaries
20K+ in 2023

SDG 6: Clean Water and Sanitation

2.6M+ lifetime beneficiaries
161K+ in 2023

SDG 7: Affordable and Clean Energy

490K+ lifetime beneficiaries
2K+ in 2023

SDG 8: Decent Work and Economic Growth

325K+ lifetime beneficiaries
9K+ in 2023

SDG 9: Industry, Innovation, and Infrastructure

648K+ lifetime beneficiaries
9K+ in 2023



EWB-USA CONFERENCE 2023

STRONGER Together



November 9-11, 2023 | Reno, Nevada

At the 2023 Engineers Without Borders USA conference in Reno, we celebrated being **Stronger Together**. Volunteers, communities, and partners joined to network, celebrate successes, and learn from peers about how we are tackling profound challenges through engineering.



“One of the best professional conferences I have attended: excellent keynote speakers, great energy from other participants, great content in sessions, and the venue and amenities were outstanding.”

—
EWB-USA Professional Volunteer



COUNTLESS
CONNECTIONS

Save the Date
March 7-9, 2025
CHARLOTTE, NC



EWB-USA CEO Boris Martin and world-renowned climate activist Kumi Naidoo share a laugh between speeches.

Join us in 2025 as we come together in **Power Through Partnership**. Don't miss this incredible opportunity to learn from and celebrate one another. We can't wait to see you there!

10
SPONSORS

45
SESSIONS



18 PARTNER REPRESENTATIVES



3
KEYNOTES

85
CHAPTERS



“This was my first professional conference experience, and it was incredible! I am a new student chapter project lead, and the sessions taught me a lot about project management and best practices for each stage of a project. I was able to make incredible connections with other project leads, presenters, and professionals, and learned a lot of lessons that I plan to bring back to my chapter.”

—
EWB-USA Student Volunteer



Scan the QR code for more details

FROM THE CEO

We all come to Engineers Without Borders USA as supporters in different ways, some as volunteers seeking to learn and make a difference, some as donors looking to leverage resources to create impact, some as mentors hoping to inspire the next generation, and some as global citizens curious to learn more about the world and ways to engineer resilience. We all come to



Engineers Without Borders USA with **belief**. A **belief** that every one of our actions tip the scale toward justice. A **belief** that the best time to take action was yesterday, and the second best time is today. A **belief** that together, we can journey toward a world where every community is built to thrive.

Building that world isn't just something that others do; it's something we all participate in. You're dedicating your time and attention to our work by reading our annual report today. By donating, you provide the resources to bring our vision to life. You volunteer your skills, voice, friendship, and so much more when you join and meet others who contribute throughout the year. Volunteers at Engineers Without Borders USA feel special because they are. You are unique and make the impact of Engineers Without Borders USA possible. **For all the ways you support us, thank you.**

Stories like the one Lydia opened this report with are the stories of many Engineers Without Borders USA volunteers. Their commitment is inspiring, and their humility is striking. They speak about how much they gained when, in reality, they gave so much. They uphold truly respectful partnerships across borders, cultures, and wealth differences.

As Lydia notes: **"Together, as a network of partners, communities, staff, and volunteers, we have the power to tackle the profound challenges communities face."**

This report inspires me as it chronicles the remarkable collective impact we all made together in 2023. It's a testament to the power of our shared vision and the dedication of thousands of volunteers who chose to contribute to our mission

throughout the year. It's this unified effort that truly transforms lives and communities.

I hope you enjoyed reading this report, and I look forward to hearing about your contributions to this effort in 2024.

Thank you.

Boris Martin
CEO, Engineers Without Borders USA

