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In 2021, the Board of Directors embarked on a mission & vision exercise that coincided with the newly adopted strategic plan. With their support and guidance, a committee was formed to address the goal of updating the mission and vision of EWB-USA. This committee focused on engaging stakeholders from across the organization, including 100 professional and student volunteers, encouraging input, feedback, and communicating any related concerns. After gathering extensive input, meeting over 15 times to discuss ideas and concerns, and putting pen to paper the committee made a recommendation to the Board of Directors in April 2022, of which the Board approved the **new** Mission and Vision statements of Engineers Without Borders USA:

MISSION

Partner with communities and develop leaders to build a better world.

VISION

A world where every leader is equipped to build and every community is built to thrive.



THE BOARD

TO OUR DEDICATED EWB-USA COMMUNITY,

We are proud to be celebrating our 20th anniversary of partnering with communities worldwide to address infrastructure challenges that impact the health, safety and economic opportunity of local residents. Since Engineers Without Borders USA began its first project in 2002 in Belize, led by Professor Amadei and group of students from the University of Colorado, EWB-USA has grown to include 239 local Chapters across the U.S. and four country offices throughout the world. Even though 2021 marked another year of the global coronavirus pandemic, our eyes widened to the opportunity that 2022 holds for EWB-USA!

We were pleased to announce that EWB-USA made an important step in realizing a key goal in our 2021-2025 strategic plan: the transition of the Uganda Country Office to the East Africa Regional Office. This will allow EWB-USA to expand the geographic reach of our Country Offices to establish regional coverage and deepen our impact through focused efforts. Our growing field operations are evidence that having a permanent, in-country presence effectively broadens the reach and impact of EWB-USA.

Over the next 20 years, the impacts of climate change will create escalating challenges for communities worldwide, driving even greater need for humanitarian engineering. EWB-USA, our supporters and volunteers stand ready to work with our partner communities to mitigate the impacts of climate change through resilient design and infrastructure. This includes convening experts in the field and bringing awareness to the issues we must address together, in addition to partnering with corporate partners in funding the resilient needs of those around the world.

We are excited to be welcoming Boris Martin as the next CEO of EWB-USA. He is a longtime, deeply passionate and committed member of the Engineers Without Borders family. Boris brings a truly unique combination of passion for the EWB mission, expertise in humanitarian engineering, and exceptional leadership and organizational management skills. The EWB-USA Board of Directors and staff are excited to welcome Boris.

Frank and I want to take a moment to be a little nostalgic in light of our 20th anniversary. On behalf of the board of directors, thank you to all those who have had an impact on EWB-USA over the years! Our growth has been inspiring, yet our work is not complete and the need for EWB-USA remains strong. Our partner communities continue to look to us for assistance and we are ready for the next 20 years of service around the globe!

IN PARTNERSHIP,



CHRIS LOMBARDO
Board President
2022



FRANK PRELI Board President 2021



14,000

1,600,000+
PEOPLE IMPACTED

506 **PROJECTS**

Looking toward the future, EWB-USA's work will not be done until communities everywhere have the essentials they need to live healthy, productive lives.

In 2021, our nearly 14,000 volunteers worked on 506 projects impacting more than 1.6 million people. We are proud to be working alongside our partners in 39 countries and 28 states and territories.

STATES AND TERRITORIES

PROJECTS UNDERWAY

284



WaterPROJECTS

28



Energy PROJECTS

32



Agriculture PROJECTS

61



Sanitation PROJECTS

69



Structures PROJECTS

4



Climate PROJECTS

27



Civil Works
PROJECTS

1



Other PROJECT

Over my years of being a State Representative at EWB-USA I have seen the job transitioned from being a project information conduit between chapters and HQ, to being a focal point for chapters and volunteers to get answers and information they need to succeed. The job is not only an opportunity to help, but it is also an honor to teach, to challenge, to grow and to lead volunteers through a process that allows them to pursue a vision of a world where every community has the capacity to sustainably meet their basic human needs. But most of all it is a privilege to be a cornerstone in the development of our world's future humanitarian leaders."

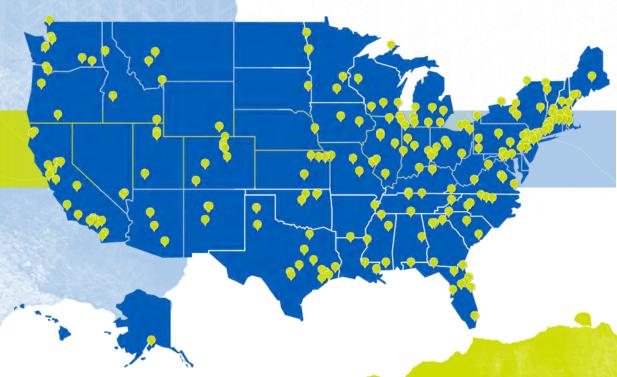
BRUCE NIEMAN

Michigan State Representative

CHAPTERS

250 ACTIVE CHAPTERS

Through a vast network of highly skilled volunteers across 250 local EWB-USA chapters in the U.S., EWB-USA is prepared to deploy volunteer teams to communities that request pro bono engineering support.





EWB-USA has helped me grow personally and professionally in ways I could never have anticipated. It helped me realize the world, including the US, has an incredible amount of work to do to help people meet their needs. Having the opportunity to meet some of these people in person has shown me that we still have more in common than I ever thought. I've also enjoyed the leadership opportunities EWB-USA has given me and went from researching well designs to strategic planner in five short years. I still enjoy doing project work as often as possible, but EWB has helped me find another passion, helping other volunteers succeed. I look forward to what the next five years has to offer and helping other volunteers find their passions within EWB."

KYLE FINSETH

University of North Dakota Student Chapter, Student Representative on the Board of Directors "Being a part of Engineers Without Borders USA has improved my ability to take on challenges and learn so much more about life. While in this organization, I have grown my leadership skills and strengthened my relationships with inspiring people."

SIERRA STAATZ

Midwest Regional Steering Committee President

Ganda COUNTRY OFFICE



Vote for thanks to the staff of GIZ and EWB-USA. As a farmer at Kalongo, I give thanks to the management of GIZ and EWB-USA, for the knowledge shared to us on farming practices, with knowledge of the beautiful sun/solar which pumps water anywhere around us. As as well knowledge on the different methods of irrigation for crops we grow. This is helping in the poverty eradication amongst us the farmers in our country, Uganda."

OKELLO JOSEPH Farmer at Kalongo

Micapagna COUNTRY OFFICE





Thank you because through your valued efforts we have been able to empower Nicaraguan rural communities and bring them the opportunity to advance in their development; without your support, this wouldn't be possible."

EDRULFO RODRIGUEZ

Nicaragua Country Manager



Exiting Co-Chair: Council of Regional Presidents (CORP)

It has been an incredible opportunity to volunteer through the Council of Regional Presidents which has allowed me a much greater appreciation for the wide variety of volunteer experiences which EWB-USA enables. Through my experience in my student chapter at WPI, professional chapter in Hartford, CT and the corporate network at Pratt & Whitney I thought I had really gotten a good cross section of what out impact story was but had really only scratched the surface.

For me personally, the impact of EWB-USA on my professional interactions, personal growth, and leadership attitudes has been enormous.

EWB-USA positioned me to get the job I have today, and the various skills from working on our projects; from coordinating multilingual project teams in another country, to digesting and delegating various project tasks to our chapter, or developing new member onboarding programs, have made it possible for me to be more effective in my assigned roles.

EWB-USA was a critical part of the foundation which developed my personal and leadership philosophies. These project experiences have driven my growth in project management, conflict resolution, task prioritizing, teamwork, mentorship, among many others.

The EWB-USA volunteer experiences have been a differentiator for me in every role I've taken on professionally, and every endeavor I take on personally, there's nothing quite like it!



New Co-Chair: Council of Regional Presidents

My journey with EWB-USA began in 2015 with the domestic project in Camden, NJ as part of the Rutgers University student chapter. In the time since, I have served as a Project Lead at Rutgers, a professional member in Denver, as President of the Boston Professional Chapter, as the Massachusetts/Rhode Island State Representative, and in 2020, served as the Northeast Region Co-President. EWB-USA has fast-tracked my development as a professional. From managing technical projects as an engineering undergrad student to rebuilding a professional chapter while still early in my career, EWB-USA has afforded me experience that the average engineering grad might have to wait a decade for, if they get it at all. While my involvement had to take a back seat over the last two years as I wrangled in life as an entrepreneur, I enthusiastically accepted the opportunity to serve as the Chair of CORP.

EWB-USA for me has always been about cultivating a positive and meaningful experience for our members. My belief is that if we can ensure that each of our members derives significant meaning from their time as an EWB-USA volunteer, the broader Mission and Vision of the organization - building a better world in which each community is empowered to meet their basic human needs - will surely be realized. By the time I step down as CORP Chair, I hope to have helped establish the EWB-USA Regions as the go-to resource for our chapters and establish best practices for our Regions that can be followed for decades to come.



FOR THE CHALLENGES AHEAD

Engineers Without Borders USA – and our 167 student chapters – give university students invaluable experiential learning opportunities every year. EWB-USA volunteer experience is a powerful complement to traditional engineering education and we can see that nowhere more clearly than in the words and reflections of the graduating class of 2022.





EWB-USA Class of 2022





Having conversations, really difficult conversations, about cultural awareness. white saviorism, global context, and the true impact and meaning of the work we're able to do, and owning up to the mistakes we make along the way."

Transforming the World — **And Myself**

Maggie Miles

Executive Fellow

My time with Engineers without Borders USA has been nothing short of transformational. I joined for the simple fact that I wanted to help people: I wanted to do something about the injustices I knew in the world and play a part in the betterment of the world. I had huge expectations of making a change in the world but what I really got out of it was a change in myself.

I started my work with Engineers without Borders USA as a young, ambitious engineering student keen on working on a non-profit infrastructure project. I think most of the students who join our cause are so excited to help someone and utilize the skills they are just starting to develop. But I think so many of us get so much more out of the experience than we ever could have thought. For me, I learned the mission of EWB USA is so much more than the incredible infrastructure we assist in building during college. I learned that my student experience with Engineers without Borders USA was part of the mission: a part of the mission to develop from my mistakes, to understand

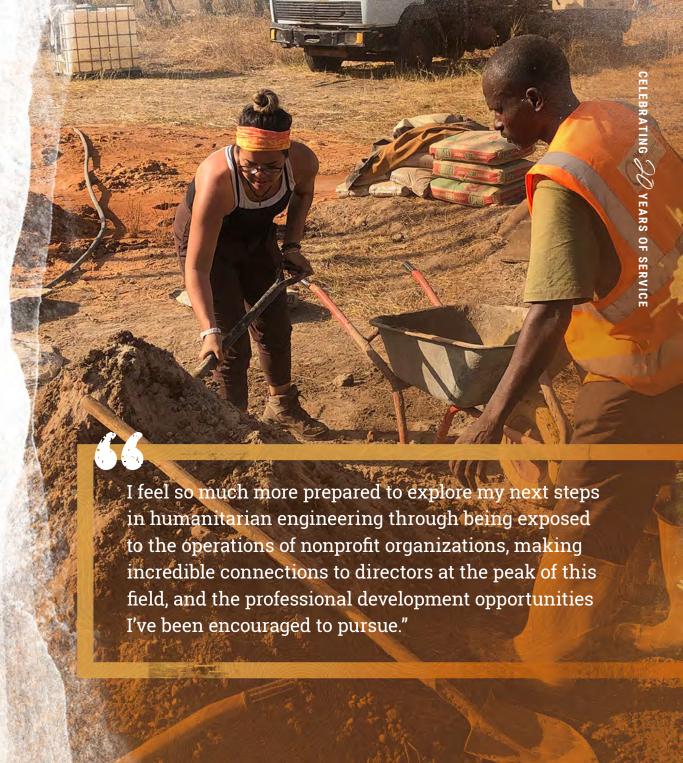
the complexities of humanitarian engineering, and to have these discussions that my peers might not be having in the classroom. Having conversations, really difficult conversations, about cultural awareness, white saviorism, global context, and the true impact and meaning of the work we're able to do, and owning up to the mistakes we make along the way.

After my college volunteering experience, I was able to have the opportunity to work under our Chief Executive Officer and the Board of Directors to help voice a student perspective on the strategy and operations of what we do. I've been able to learn what running a non-profit organization really takes and how my experience is a direct result of the importance of education within our mission. I feel so much more prepared to explore my next steps in humanitarian engineering through being exposed to the operations of nonprofit organizations, making incredible connections to directors at the peak of this field, and the professional development opportunities I've been encouraged to pursue.

{ Continued: Transforming the World — And Myself }

Lastly, I've been able to mentor students in the similar struggles, successes, and projects that I worked on in my college career - giving back to the program that brought me so much.

Because of the work I've done with Engineers without Borders USA I am a better, more thoughtful and responsible humanitarian engineer who is not afraid to learn from her mistakes to make myself, the people around me and the world better. Our volunteers are having these conversations to make who we are and what we do better every single day around the globe. A mentor once told me that we, as young people, are in an incredible position at this time to make a mark in history, to change things forever, and to move the world forward better than it once was. I think as an organization EWB USA has been set up to make incredible advances for the upcoming year and foreseeable future - and I am so incredibly grateful to be a part of that.



EWB-USA Class of 2022



Now I realize that food deserts and the possibility of famine can exist anywhere."

Supporting Urban Agriculture to Tackle Food Deserts in Washington, D.C.

Cheikh Badiane

Howard University Student Chapter

Cheikh and the Howard University Student Chapter helped to design and implement 15 raised garden beds, a timed drip irrigation system, and a paved path and handrail for a community garden in Southeast Washington, D.C.

The garden, managed by Allen Chapel African Methodist Episcopal (AME) Church and known as the Garden of Eden, also has 14 fruit trees. Fresh food from the garden contributes to the church's food pantry, which serves residents of the neighboring communities, many of which are food deserts.

Originally from Africa, Cheikh was surprised to encounter food insecurity in the U.S. He told the Washington Informer, "Famine and food deserts is a massive thing where I'm from in Senegal as well as where I grew up in Kenya but I didn't think it was a problem in D.C. Now I realize that food deserts and the possibility of famine can exist anywhere."

Cheikh recalls the ribbon-cutting ceremony for the new garden beds as his most memorable moment as an EWB-USA volunteer. "To be able to see something that my team and I had worked on extensively come to be was an incredible feeling. Coupled with the joy on our clients' faces, that was an experience I would not exchange for anything."

After graduation, Cheikh will move to Indiana where he will start a position as test engineer for Cummins, Inc.

EWB-USA Class of 2022



We are trying to help them gain more confidence and really take ownership of the systems."

Empowering Communities in Africa with Clean Energy Infrastructure Solutions

Jenna Knudtson

University of Nebraska Student Chapter

As Jenna looks toward the future and her engineering career, it's clear the impact that her time as an EWB-USA volunteer has had. Jenna joined the Chapter's Solar Team, becoming a colead as a freshman and serving in that role for all four years.

Jenna traveled with the University of Nebraska Chapter to Madagascar in the summer of 2019 as part of a project to install solar-powered lighting systems in seven schools in the Kianjavato district. Lighting increases the hours that students and teachers can use the school facility and allows members of the community to use the schools as a gathering space and to charge small electronics like phones.

The Madagascar team also created an operations and maintenance manual for the power systems in the schools, a vital tool for the Chapter's Malagasy partners. "We are trying to help them gain more confidence and really take ownership of the systems," Jenna said.

While Covid prevented a return trip to Madagascar, Jenna will travel with her Chapter to Zambia to support a bridge project and assess the community for solar power. The two Zambian communities of Sindowe and Simulunda are separated by the Kalomo River, which floods during the rainy season and becomes too dangerous to cross. This leaves people without access to the markets and medical facilities. Jenna's upcoming trip is focused on surveying the land where the proposed bridge passages may be.

When asked about the skills gained through volunteering with EWB-USA, Jenna responds: "I learned a lot about mental toughness. Most of the time you have to do something wrong many times before you finally figure it out and get it right."

HIGHLIGHTS

Twenty Years of Learning & Impact

For 20 years, EWB-USA has provided humanitarian engineering across the world, positively impacting the lives of nearly 3.5 million people. What started from one project in San Pablo, Belize has grown to hundreds and hundreds of projects every year across many many communities spanning the globe.

A lot has changed in 20 years, but a lot has remained the same.

EWB-USA continues to believe that communities are the most effective agents for lasting, positive change; that sustainability isn't just a goal — it's a practice; that engineering solutions create opportunities for communities to thrive; and that leadership is fostered through multidisciplinary, cross-cultural and hands-on interactions. These beliefs are at the heart of EWB-USA, and because of that, we have seen some amazing successes over 20 years!



Impact on Volunteers

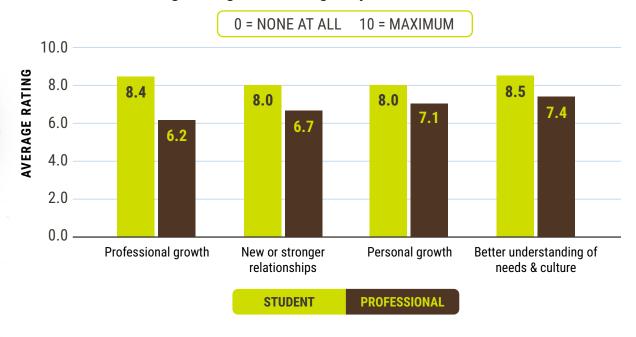
Volunteers report their experience with EWB-USA has a major impact on personal and professional growth in the areas of broadened awareness, opportunity to gain and contribute skills/knowledge, mentorship, and the opportunity to impact others.

On a scale of 0-10, students and professionals overall reported significant professional and personally growth in many areas, with the highest growth reported in "Better understanding needs and cultural awareness."

"With EWB-USA I feel like I'm making an impact on communities that's unparalleled with any other volunteering program I've been a part of."

Student Volunteer

Level of growth gained through experience with EWB-USA



"Working with students and mentoring them in project development and completion is rewarding in the latter part of my engineering career."

Professional Volunteer

Increase in Beneficiaries

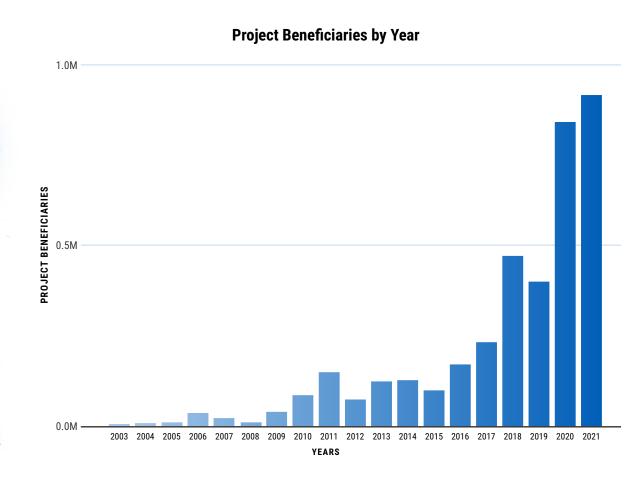
The number of individuals impacted every year by EWB-USA's work across the globe has continued to increase. Both small community driven projects and larger Country Office projects ensure the world's most vulnerable people have access to critical infrastructure.

"[EWB-USA's] involvement hasn't just helped me, it has helped my community."

Community Member, Honduras

"WASH in rural Health Clinics is a critical part of the prevention and treatment of infection and spread of disease. When you commit to improving one thing, you actually impact many."

EWB-USA Staff



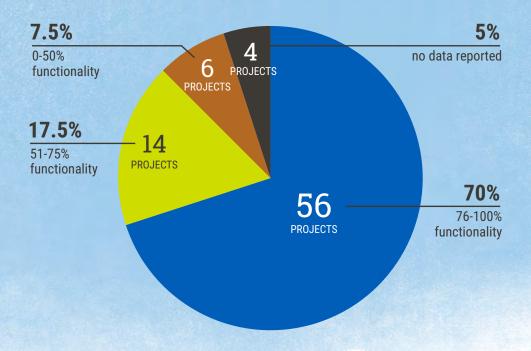
Project Delivery & Functionality

Communities in need of engineering support continue to connect with EWB-USA for skilled volunteers, technical expertise, and financial resources to solve local infrastructure challenges. Thanks to the collaboration and growth of Country Office support for project teams, as well as the investment in the organization's operational needs, projects continue to remain stable years after completion.

20 years of work has also influenced changes, oftentimes necessary to continue the mission and impact. As a growing organization, even in our youthful age, we must learn to adapt and grow to the needs of those we partner with and serve, as well as address growing concerns that will impact these communities over the next 20 years.

Percent of Functionality

70% of projects are highly-functional at the time of monitoring



"The thing that stands out to me about EWB-USA is the focus on working with and empowering communities and listening to what their plans and wants are rather than just coming in and forcing the organization's way like a lot of organizations tend to do."

Student Volunteer

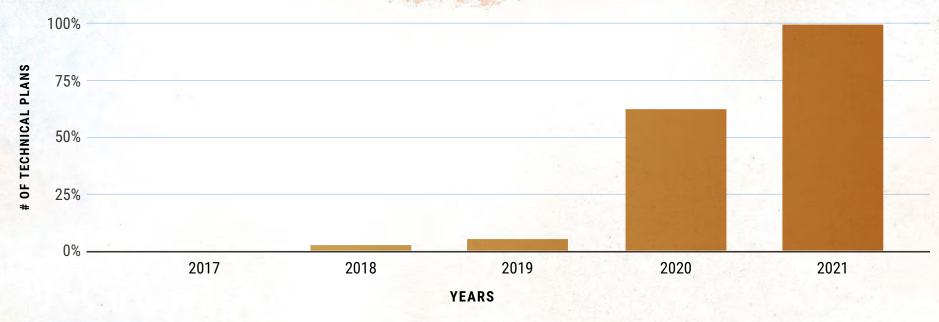
Impact of Remote Work & Country Offices

While remote work was unofficially conducted for years, it was extremely rare until the 2018/2019 travel suspension to Nicaragua. In response to the COVID-19 crisis, EWB-USA put additional resources into supporting remote work, ultimately delivering on commitments around the world and completing more projects than previous years.

"We have been lucky to have her and the whole Nicaragua Country Office available to provide such valuable support. We couldn't have done this without you all!"

Volunteer Working on a Remote Project in Nicaragua

Percent of Technical Plans by Year Remote





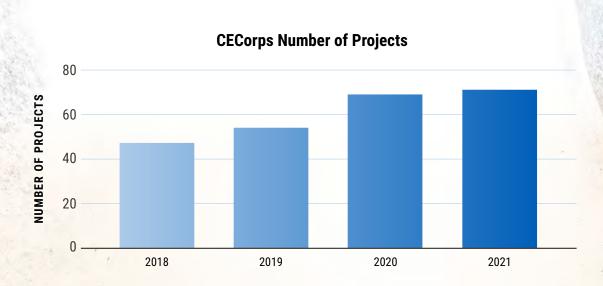
The Rise of Community Engineering Corps (CECorps)

New domestic project formation through CECorps **increased by 75% from 2017 to 2020**. As infrastructure needs continue to be highlighted in the United States, the work of EWB-USA and our partner organizations will continue through community awareness, advocacy, and collaboration.

"It provides valuable experience and insight for students.

Provides an understanding of how to communicate and work with clients while adapting to real-world constraints and processes."

Student CECorps Volunteer



Climate Resiliency

Faced with the growing impacts of climate change, the need for EWB-USA and our supporters and volunteers – as well as the positive impact of our collaborative work – is difficult to overstate. EWB-USA has been implementing climate resilient design into our projects since 2019. The time to strengthen our evaluation techniques in order to focus on the specific climate challenges experienced by our country/regional offices has arrived. While we have advanced in our knowledge of how to address infrastructure needs in the face of climate change, there's no question that the impacts of climate change are becoming more severe than originally projected.

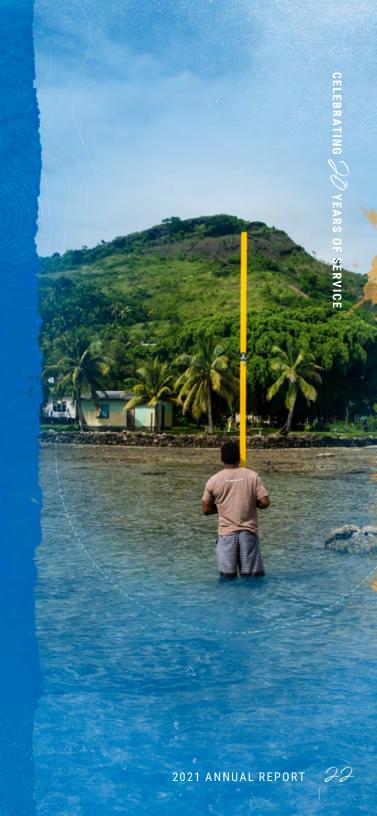
"We experience issues with water availability during the dry season, as the water table is much lower than the early years of the well"

Community Member, Nicaragua

At the core of EWB-USA's work over the next decades will be to ensure the sustainability of all of our projects, to implement resilient solutions for EWB-USA partner communities, and build the skills and experience of the subsequent generations of professional engineers. We will continue to build footbridges to provide pathways to opportunities, install solar panels to bring light where it is dark, and drill for water so hope can spring from the ground.

And because it takes more than concrete and steel to build a strong foundation, the work of EWB-USA will continue to be powered by our amazing, committed volunteers. They will continue to partner with underserved communities to improve conditions while offering students a transformational handson learning opportunity that is a powerful complement to their traditional engineering education.

Looking toward the future, EWB-USA's work will not be done until communities everywhere have the essentials they need to live healthy, productive lives.



Our Highlights: CECorps

Humanitarian Engineering for Underserved U.S. Communities



FOCUS ON CECORPS

After dangerous infrastructure failings made headlines in 2014, Community Engineering Corps (CECorps) was formed to address the growing infrastructure distress and deterioration in rural and underserved communities across the United States and territories.

CECorps recognized that the ever-worsening infrastructure issues in the U.S. were disproportionately impacting underserved communities. We also wanted to honor our volunteers' desire to utilize their engineering expertise to support communities right here at home. Thus, Community Engineering Corps was created.

In broad collaboration, a framework for domestic projects has evolved that provides CECorps volunteers with a project process that supports communities with the technical expertise they need. CECorps is a partnership of the American Water Works Association, American Society of Civil Engineers, and Engineers Without Borders USA.

Over the past eight years, CECorps teams have completed 53 infrastructure projects in 24 states and territories, as well as provided technical engineering assistance to 48 communities on projects related to water, sanitation, civil works, structural, energy, and agriculture. CECorps teams across the nation are currently working on 72 active projects in 29 states and territories.

Over the past eight years:

53 INFRASTRUCTURE PROJECTS



24 STATES & TERRITORIES

Currently working on:

72 INFRASTRUCTURE PROJECTS



29 STATES & TERRITORIES

What follows are highlights of two CECorps projects past and present



A Small Community With a Big Wastewater Problem

The small town of Grover Hill in northwest Ohio has a rundown wastewater collection system that is prone to overflow during storms, resulting in sewer backups. Homes in Grover Hill all have their own septic tanks, which are badly corroded, and the town's wastewater treatment plant has had multiple equipment failures. Grover Hill's financial situation is dire but the town has been reluctant to raise sewer rates since the majority of the town's 400 residents are elderly and low-income.

Through CECorps, a team of volunteers was sent to Grover Hil. After conducting extensive fieldwork and research, the team produced a 348-page report that outlined the technical issues and recommendations for corrective actions. This report allowed the community to apply for and receive a grant award of \$1M to begin the implementation of the recommended solutions. This project was completed in 2018.





Engineering a Peace Garden in a Community that a Highway Divided

Before the implementation of Interstate 94, Rondo was a thriving Black community in St. Paul Minnesota. But in the 60s it was demolished to make way for the new interstate. The community is commonly referenced as an example of infrastructure inequality. The demolition of this community and the creation of the interstate not only destroyed historical Black neighborhoods but severed the community's access to many resources including grocery stores making the area a food desert.

Urban Farm & Garden Alliance (UFGA) is a network of 10 community gardens that promote health and nutritional learning, events, and workshops to support the communities of Rondo and Frogtown. The shared goal is to revitalize the community through gardens and green spaces. UFGA connected with the EWB-USA University of Minnesota chapter to improve the infrastructure of their garden, including the design of a greenhouse structure to lengthen the growing season and recommendations for accessibility improvements throughout the space.

Our Highlights: Nicaragua

In the Field-On the Ground





Impacts of Climate Change in Partner Communities Underscore Need for Resilient Infrastructure

After two long years, EWB-USA teams are back in the field. Members from the EWB-USA Denver, Colorado office and the Nicaragua Country Office visited EWB's projects across Nicaragua in March to assess the projects and support our community partners.

The impacts of climate change are clear and top of mind for residents. The weather patterns are more variable, less predictable, and farmers have little certainty as to when to plant and harvest. The temperatures are generally hotter, and the heat lasts longer. The wet season has gotten shorter with the rains start later. The impacts of the changing weather patterns has led to lower crop yields and forced farmers to adopt new agronomy strategies to try and the mitigate impacts.

Increasingly intense storms are accelerating erosion and soil loss. Shallow hand dug wells are drying up for longer intervals. The ground water available to deeper boreholes has a delayed response, and a dry year one year can lead to reduced yields from boreholes the next year. In many communities, household water is now being rationed.

Addressing these challenges requires a comprehensive and multifaceted approach to climate resilience. The climate mitigation strategies EWB-USA is exploring with our Nicaraguan partners include strategic soil erosion reduction and water retention planting; use of alternate seed types with shorter growing seasons; greenhouses and hydroponics; slope grading and terracing; vegetation recycling and soil enhancement through composting and retention.

EWB-USA teams found that eight out of nine projects were still functional, and the projects are being well maintained by the partner communities, including consistent funding mechanisms for project repairs. (The only project no longer functional is the El Limon energy project - solar panels to power a well pump - which is no longer used as the current pump is connected to the grid.)

What follows is a brief summary of EWB-USA's projects in Nicaragua. All these projects relied on strong partnerships between EWB-USA, our Nicaragua Country Office, partner communities, and local NGOs.

Our Highlights: Nicaragua





Coffee Processing Structure

TIERRA NUEVA

The new structure is leading to growth in community capacity and additional development opportunities. By eliminating transportation and processing costs, more money is staying local. The structure is used for purposes beyond coffee processing, including as an emergency shelter, to dry other crops, and to store beans and grains. The project also includes composting (instead of burning) enabling farmers to use less fertilizer and reduce greenhouse gas emissions. Strong partnership with AGROS, a local NGO, enables the project to support a pathway for farmworkers to pursue land ownership.

High-Efficiency Cook Stoves

NUEVO AMANECER

Less fuel means less money spent. Not only that, but the project has also led to safer environments and improved health for residents. The new stoves are virtually smokeless, limiting exposure to smoke for residents, and EWB-USA has supported air quality testing. Residents with asthma and other respiratory issues have reported their conditions are much improved. What's more, the new stoves heat faster, need less repair than mud stoves, preserve cooking pots, and provide more surface space.



Tanks, Water Lines, and Household Taps to Extend Water System

SADRACH ZELEDON

Prior to the project, the community relied on a private water truck that was costly and led to arguments among neighbors. Bad roads during the rainy season meant water trucks couldn't get to higher houses. Now, even the higher houses have water taps, and those water arguments among neighbors have stopped. Water used to cost 20-50 córdobas per 208-liter barrel. Now 1,000 liters costs just 7 córdobas. Perhaps most significant is how the project has led to community residents, particularly women and girls, feeling safer. Women and girls in the community used to have to carry water in buckets from trucks to their homes, straining their backs. They were afraid to go to the river to do laundry but now with a tap at home they can do laundry any time.



A New Pump House, Tank, Distribution and Community Tap Stands

EL LLANITO

This project has dramatically reduced water costs for residents. Water used to cost 1,200 córdobas per family per month for trucked-in barrels. Now families pay 50-100 córdobas per month. The project has also eliminated the long line as the rope pump, giving women more time in their day. Water kiosks are located closer to residents' homes making it easier to collect the water and reducing the physical strain.



Solar Panels for Water System and Composting Latrines (Two Projects)

EL LIMON

Over the past 10 years the water table has drastically reduced. As shallow sources of water dry up, this project gives the community a reliable well for water. Five composting latrines were installed to protect the well. After the project, other families chose to construct the improved latrines on their own properties, without EWB support.



Pedestrian Bridge and Well With Piping, Tanks, and Taps (Two Projects)

LOS GOMEZ

Previously, the community used hand-dug wells but these wells did not produce water during the dry season. Now, community members have a sustainable, reliable source of water. Where they used to stand in line to get water from hand wells, people now have more time to work, study or care for their family. Prior to the water project, residents of Los Gomez also supported a pedestrian bridge project to provide access to a neighboring community.



Piped Gravity Water System to Tanks and Water Kiosks

LA BENDICION

This project has led to greater privacy and convenience, allowing residents to shower and wash clothes in their own homes. Because water is closer, cooking has become much easier.



UGANDA



Finally, the Community of Namutamba Has Safe Water!

After previous attempts, the community was skeptical the project could succeed, but the Penn State Chapter of Engineers Without Borders USA was determined.

The agricultural community of Namutamba in the Mityana District of Uganda has a population of about 3,900, many of whom work on farms growing tea, coffee, bananas and beans.

Yet Namutamba, until recently, lacked access to a safe and convenient supply of water. The community's main sources of water were springs, rainwater catchment systems, boreholes, and open sources like creeks, rivers, and uncovered surface wells. In the past, the community tried to build a reservoir to collect water from the community spring, but it did not meet the community's water needs and was still located far away.

In August 2021, a team of hydrogeologists contracted by PSU-EWB conducted a hydrogeological survey in Namutamba and recommended two sites for drilling. These sites were thought to have the required volume of water that would be required to develop a groundwater system to serve the community.

In March, PSU-EWB contracted a drilling company to implement the first phase of the project and drill the borehole that would serve as the water source for the community. The Uganda Country Office of EWB-USA provided project support and supervision.

"My children are prone to wild accidents and also do take longer hours when collecting water from the well. The water quality is not pleasant (dirty water), especially for those who fetch water during the afternoon and evening hours. I have already visited the site and saw the drilling process taking place."

Sekinyiko Moses

{ Continued: Finally, the Community of Namutamba Has Safe Water! }

When the work began, engineers understood the water around Mityana District was strained and anticipated the yield would be roughly five cubic meters per hour. So, engineers and community members were thrilled when the team managed to get a yield of 20 cubic meters per hour, providing Namutamba village with more than enough water to meet their demand.

A hand pump has been installed as the EWB-USA team prepares to fundraise toward the next phase of the project which will include the motorization of the borehole and construction of the transmission and distribution network.

The community of Namutamba is delighted with the project and to be finally accessing safe water close to their homes from the hand pump. Many of the community members had seen many organizations try to set up groundwater systems in the area only to fail and give up. The success of this project blew away any doubts that remained.



Our Highlights: Uganda



The Status of WASH in Uganda's Health Care Facilities

The majority of the 104 hospitals, 2,536 lower-level health facilities, and 27 nursing and midwifery training schools in Uganda are located in rural areas. Despite the efforts by Uganda's Ministry of Water and Environment to provide water and sewage services in urban and rural areas, access to water that is provided by public utilities is still poor and intermittent across the country.

Most of Uganda's health care facilities (HCFs) with access to the public water system are only connected with a tap-stand. The situation is worse in rural areas, where HCFs must share boreholes with communities, use rainwater harvesting tanks, and access open and unprotected water sources to get the water needed to provide health care services.

Existing sanitation facilities are mainly pit latrines with insufficient facilities for the number of users. In most cases, the latrines are not separated by gender and are often shared by both staff and patients. Very few HCFs have functional incinerators for medical waste, so hospitals often resort to burning the medical waste in the open or dumping it.

The EWB-USA Uganda Country Office recently conducted a WASH in HCF assessment and collected input from HCF stakeholders from across the country.



"We do not have tapped water here. Water for the facility is manually fetched from a hand pump about 100 meters away. This hand pump was drilled in 2008 by the district for the HCF and community. This hand pump is always faulty because of how it is handled by the community. In the past year, it broke down about five times. It takes long to get repaired. We have to rely on unprotected sources when the hand pump is down."

Christopher Achire of Obera Bic Health Center II
AMURU DISTRICT

Our Highlights: Ecuador



Answering the Call as Water Supply Remains a Priority for Communities

Near the Mache Chindul national rainforest in the north Manabi province sits the 31 family community of Agua Fria. In 2016, following a devastating earthquake that impacted their main sources of water, including the Pavon River, the community sought help from EWB-USA.

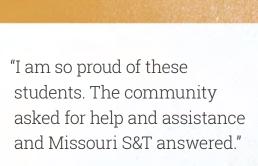
Enter the Missouri University of Science & Technology (Missouri S&T) chapter.

During the Missouri S&T chapter's first assessment trip, field water testing revealed that the water had fecal coliforms present in all the stages, which contributed to the residents' ongoing health issues, including high rates of diarrhea in both children and adults. These results forced the Missouri S&T chapter to develop and implement a rain catchment system which was applied to the school within the community. The success of this initial system, along with the acceptance of the technology

used, allowed the chapter to develop similar systems at the household level for water board beneficiaries who live further away and are unable to benefit from the gravity system. In 2021, rainwater catchment systems were remotely implemented in 11 houses with the support of the EWB-USA Ecuador Country Office and its local partner.

The chapter refuses to be done helping the community. While they are currently working on monitoring and evaluating the implementation of these initial systems, they are actively working on the design of a gravity system for the remaining population in need.

In another area of the Manabi province, in one of the driest parts, sits the Cerro Verde community. Tankers is the only access of water to this community, as testing showed 85% of the water consumed by the community had the presence of fecal coliforms, which like the community of Agua Fria, contributed to the residents' ongoing health issues, including high rates of diarrhea in both children and adults. Something needed to be done.



Daniel Oerther, PhD MISSOURI S&T AND EWB-USA BOARD MEMBER



{ Continued: Answering the Call as Water Supply Remains a Priority for Communities }

Enter the Atlanta Professionals chapter.

The chapter sought a pilot project of BioSand filters that was developed for the community. It was a huge success! Because of that, the Atlanta Professionals chapter decided to complete the provision of these filters at the household level throughout the entire community in conjunction with WASH workshop trainings.

The implementation took place in September 2021 and data is already showing that there has been a significant reduction of stomach diseases! Water quality sampling confirms that the biofilters project has had amazing results. For example, while ther e has been significant improvement in the taste of the water, the indirect benefits are probably some of the most obvious.

Significant improvements have been achieved in community organization and social participation with the implementation of this project. With filters in the house, families have stopped buying bottled purified water, which has translated into economic savings for the household, allowing them to direct those funds to education and additional health and safety needs.

This chapter also refuses to be done helping the community. While they are currently working on monitoring and evaluating the implementation of these systems, the Altlanta Professionals chapter's next goal is to find a permanent water source that supplies the entire community.



a project, it's a connection.

Shoutout to the Missouri S&T chapter who, in 2020, helped the families of Agua Fria by sending family protection kits to the community to help address the COVID-19 pandemic while also helping fund COVID -19

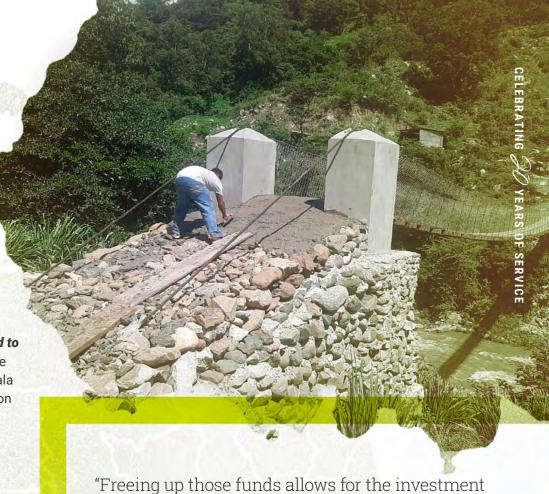
Our Highlights: Guatemala



Putting Forth the Extra Effort from Marquette University

Right there on Marquette University's homepage is a statement to its students that "you'll be challenged to push your boundaries, to lead and to serve, to open your heart and to hone your mind." EWB-USA's Marquette University chapter proved just that in 2021, partnering with the Guatemala Country Office to bring two projects to completion, begin construction on a third, and wrap up the year with a remote assessment on yet another.

The chapter's first project completed, the Guacamayas Pedestrian Bridge, is an important link between the municipalities of San Martin Jilotepeque, Chimaltenango and Joyabaj, Quiché. The 200 people who live in Guacamayas previously had to either hike two hours to get to where the highway crosses the river, or else risk their lives on a rickety self-built pedestrian bridge, to get their products to market or get sick people to the nearest health center. With this new 200ft suspended bridge over the Motagua River, the villagers now have safe, quick access to the market and the health center, saving them money and helping them get health services quickly in case of an emergency. Their second completed project helped provide solar energy to the orphanage in Santa Apolonia, Chimaltenango. The orphanage, which houses approximately 30 Kagchikel Mayan children, has struggled year after year with high electricity costs - costs the community just cannot consistently take on. The Marquette University chapter designed a grid-connected solar energy system which has reduced the orphanage's monthly electricity bill by approximately \$750!



"Freeing up those funds allows for the investment in the children's education. That is something that not only is important today, but important for the future of those children!"

Steve Crowe, EWB-USA Guatemala Country Director

{ Continued: Putting Forth the Extra Effort from Marquette University }

Finally, the Marquette University chapter worked in close coordination with the Guatemala Country Office for the other two projects through remote implementation and assessment. The Aguacate School Bathroom project, which will provide hygienic sanitary facilities to 50 children at the Aguacate primary school, and the El Tesoro water project, which will provide potable water to 324 people in the village of El Tesoro in San Martín Jilotepeque and implemented in partnership with the Rotary Clubs of Milwaukee and Vista Hermosa, are more examples of the Marquette University chapter's commitment to the communities in Guatemala...

...and to, as Marquette University states, push their boundaries, to lead and to serve, and to open their hearts and hone their minds.

Thank you Marquette University chapter!

EWB-USA's corporate partners had an active year in Guatemala as well!

Several remote assessment activities were carried out by the Guatemala Office in partnership with corporate partner, HDR, including pump testing of a potential spring source, hydrogeological studies of potential borehole sites, and a topographic survey of the proposed distribution piping layout. These were part of a water project in the community of Chaquijyá, Sololá, which will feature a borehole and distribution system that will provide potable water to over 1,100 people in the village!



FINANCIALS

Thanks to the steadfast support of the entire EWB-USA community, we fulfilled our commitments to communities around the world when they needed us the most. Take a look back at our 2021 assets, liabilities, net assets, revenue, gains, and support services.



Our Financials

Statement of **Financial Position** 2021

| CURRENT ASSETS | |
|-------------------------------------|--------------|
| Cash and cash equivalents | \$6,972,474 |
| Investments | 2,916,872 |
| Contributions and grants receivable | 725,339 |
| Prepaid expenses | 61,108 |
| Project advances | 26,970 |
| Funds held on behalf of EWB-I | - |
| Furniture & equipment (net) | 45,590 |
| Investments - endowment | 322,053 |
| TOTAL ASSETS | \$11,070,406 |
| | |

Assets

Liabilities & Net Assets CURRENT LIABILITIES Accounts payable and accrued expenses \$92,370 Accrued personnel costs 70,343 Refundable advance Agency liability Refundable advance - PPP 601,434 **Total Liabilities** \$818,689 **NET ASSETS** Without donor restrictions \$3,139,551 With donor restrictions 7,112,166 \$10,251,717 **Total Net Assets TOTAL LIABILITIES AND** \$11,070,406

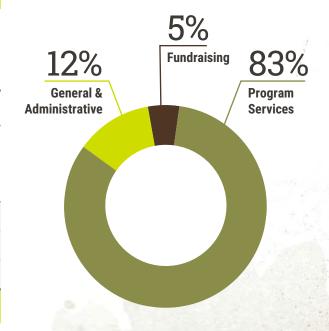
NET ASSETS

Our Financials

Statement of Activities 2021

| Revenue, Gains & Support | Without Donor Restrictions | With Donor Restrictions | TOTAL |
|--------------------------------------|-------------------------------|----------------------------|-------------|
| Contributions, grants and contracts | \$5,693,284 | \$3,373,404 | \$9,066,688 |
| In-kind project mentor contributions | 678,500 | - | \$678,500 |
| Other income | 28,662 | - | 28,662 |
| Investment return | (10,292) | - | (10,292) |
| Net assets released from restriction | 3,021,852 | (3,021,852) | - |
| TOTAL SUPPORT & REVENUE | \$9,412,006 | \$351,552 | \$9,763,558 |

| Expenses | Without Donor Restrictions | With Donor Restrictions | TOTAL |
|----------------------------|-------------------------------|----------------------------|-------------|
| PROGRAM SERVICES | | | |
| Total Programming Services | \$6,055,756 | - | \$6,055,756 |
| SUPPORTING SERVICES | | | |
| General and administrative | \$908,846 | - | \$908,846 |
| Fundraising | 354,654 | - | 354,654 |
| Total Supporting Services | \$1,263,500 | - | \$1,263,500 |
| TOTAL EXPENSES | \$7,319,256 | - | \$7,319,256 |





SUPPORTERS

On behalf of our volunteers and all the communities around the world that partner with EWB-USA, we thank and recognize the supporters below who gave \$1,000 or more to strengthen our capacity to engineer change.





...the decisions we make today create a ripple effect of positive change and leave behind an everlasting footprint."

No Need to Wait... to Give

Davies Allan-Maine has always seen the big picture. Even as a young man he encouraged his own parents to think ahead for themselves and his siblings, knowing even then that their real estate and other assets could be put to use helping to make the world a better place. As an adult, Davies has been an EWB-USA supporter for many years, but he recently asked himself "Is there anything else I can do to help?" He knew the answer was yes.

Davies is an accomplished man, a man published many times over, responsible for helping build the largest covered bridge in New Hampshire. He is a business owner and a father. but he is also driven by more than publications and awards. Just as we work today to ensure disadvantaged communities have resources for future generations, Davies knew he could also plan ahead by leaving the gift of legacy through an endowment to EWB-USA.

"Give the money while you are able; be in control of dictating where that money goes and how it impacts the world long after you are gone." Davies shared.

When he made the decision to donate, the stock market was doing well, producing for its investors. But life experience had taught him that it would not always be that way, and an investment in humanity was one that would always yield positive results.

In the same way you can ensure your loved ones are protected beyond your lifetime, you can support the causes you most care about. A legacy gift to Engineers Without Borders USA is a contribution that gives you the piece of mind that you're giving the gift that carries on.

Davies works to instill in his three sons the importance of making a lasting impact on the world, and he hopes others will consider making a commitment to future generations in their legacy plans.

Davies says that it can be an uncomfortable thing to address. "Nearly 90% of individuals worry about giving away assets prematurely," but the thing to think about is how "the decisions we make today create a ripple effect of positive change and leave behind an everlasting footprint."

You can help the EWB-USA mission continue as part of your philanthropic legacy. A bequest to EWB-USA in your will or trust is a way to ensure that the work to empower communities in need of basic and critical resources will continue for years to come.

Cornerstone Society

When you include Engineers Without Borders USA in your long-term estate or financial plans, you create a lasting legacy committed to building a better world through engineering. To learn more about contributing to the EWB-USA mission through a legacy gift, such as listing EWB-USA as a beneficiary of a life insurance policy, a retirement plan, or through other estate planning, reach out to the Development team at PLANNEDGIVING@EWB-USA.ORG.

Not without you...





Thanks to special funding from the **Arconic Foundation**, EWB-USA has been able to advance our commitment to embed climate change considerations into the project and opportunity vetting and planning process, thus helping implement more climate resilient infrastructure to communities across the globe.

Thanks to a lead investment from **Collins Aerospace**, EWB-USA launched a Clean Energy
Initiative to help improve access to clean energy
solutions in underserved communities around
the globe.

Donor Honor Roll

\$1,000,000+

Anonymous

National Council of Examiners for Engineering and Surveying (NCEES)

\$500,000 - \$999,999

Anonymous

Bechtel Group Foundation

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\$1,000 - \$4,999

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2021 **Conference Highlights**

771

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from

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Save the Date
October 8, 2022

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