



2009

EWB-USA ANNUAL REPORT

BUILDING A BETTER WORLD | ONE COMMUNITY AT A TIME





Our Mission

EWB-USA supports community-driven development programs worldwide by collaborating with local partners to design and implement sustainable engineering projects, while creating transformative experiences and responsible leaders.

Our Vision

Our Vision is a world in which the communities we serve have the capacity to sustainably meet their basic human needs, and that our members have enriched global perspectives through the innovative professional education opportunities that the EWB-USA program provides.

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Michigan Tech student and Bolivian participant review the construction point of the use of the water filter.

more than
400
sustainable
engineering projects

in over
45
countries
around the world

more than
\$7.1
million
delivered in support
of sustainable
engineering projects
in 2009

Dear Friend of EWB-USA,

We take great pride in sharing the Engineers Without Borders-USA 2009 accomplishments with you. Over the past year, our major accomplishments include more than 400 sustainable engineering projects in process in over 45 countries around the world, completion of a new strategic plan that will guide EWB-USA into the future and organizational investments that will help us better meet the needs of our student and professional chapters and the communities with which they work. This past year, we have grown dramatically, greatly expanding the reach of our mission and vision.

More exciting than these achievements, however, are the transformations we can see in the people and communities our chapters serve. EWB-USA continues to partner with communities to provide access to clean water, adequate sanitation, and clean, renewable energy sources, while simultaneously fostering responsible leaders capable of 21st century innovation and global collaboration. As you read through this report, we are confident that you will be impressed with stories from our chapters and the communities they are serving, as well as all the great strides we are making to continually impact thousands of people with our community-driven development programs.

Thanks to the generosity of our supporters and the dedication of our worldwide team, EWB-USA delivered more than \$7.1 million in support of sustainable engineering projects around the world in 2009. We look forward to the challenges that lie ahead in 2010 and will continue to enhance our community development program model to include stronger monitoring and evaluations, attract more technically advanced mentors and continue to strengthen our organization as a whole.

We hope you will continue to be as inspired as we are with the great strides that we are making to provide our communities with access to their basic human needs and our members with enriched global perspectives.

Thank you. Together we are building a better world.

Sincerely,
Dave & Cathy

LETTER TO YOU



A handwritten signature in black ink that reads "David Stewart".

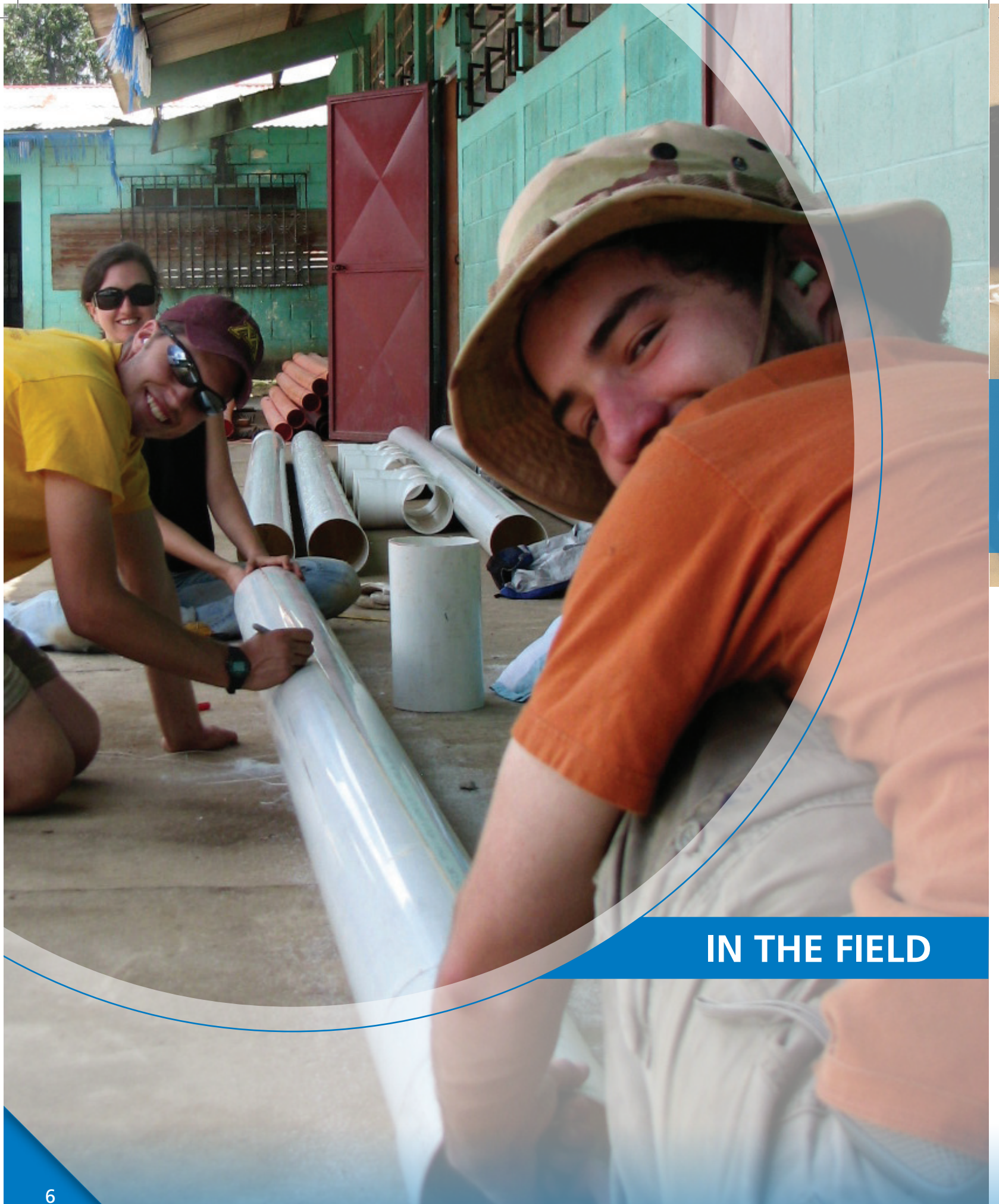
David Stewart, Ph.D., P.E., EWB-USA Board President
President and CEO
Stewart Environmental Consultants



A handwritten signature in black ink that reads "Catherine A. Leslie".

Catherine A. Leslie, P.E.
Executive Director
Engineers Without Borders-USA

Thank you.
Together we are
building a better world.



IN THE FIELD



After the EWB-USA Michigan Tech chapter implemented the water filtration system, the Montero community residents sat down with chapter members and local NGO, Etta Projects, to learn about disease transmission and hygiene.

HYGIENE EDUCATION & WATER FILTRATION

In 2007, the EWB-USA Michigan Technological University Student Chapter partnered with an NGO, Etta Projects, to develop a low-cost water filtration system and hygiene education program to improve the health of four impoverished communities near Montero, Bolivia: La Pampa de la Madre, Rodeo Del Norte, La Paraiso, and Litoral. The families in these communities were drinking unsafe water from shallow contaminated wells without treating it.

During the first implementation trip in March of 2009, the team helped Etta Projects implement the filtration system that was designed. Since the project began, more than 380 people have been directly affected by the introduction of the filtration system, and another 800 have been involved in programs to improve health. Within the scope of the 380 families directly affected, a 95% reduction in

the occurrence of diarrhea has been reported by Etta Projects as well as measurable improvements in overall family hygiene.

The fifteen students involved in the project gained a better understanding of the difficulties and rewards of international development work. One main challenge during this project was the communication of technical information to Etta Projects. After implementation it was found through water testing that re-contamination was occurring. The engineering team then worked remotely through Etta Projects to find the source of contamination and resolved the issue. The majority of the funding for the project came from Rotary International in the form of a \$35,000 grant; other funding was provided through local fundraising by the Michigan Technological Student Chapter.

**EWB-USA
Michigan
Technological
University
Student Chapter**

**Project Location:
Montero, Bolivia**

**Total Project Cost:
\$50,000**

**Total People Affected:
2,000**



Together, Simahjuleu and EWB-USA are on the way to creating a safe and reliable water supply.

**EWB-USA
Minnesota
Professionals and
University
of Minnesota
Student Chapters**

**Project Location:
Simahjuleu,
Guatemala**

**Total Project Cost:
\$250,000**

**Total People Affected:
2,500**

RAINWATER HARVESTING

The EWB-USA Minnesota Professional and University of Minnesota Student Chapters began working with the village of Simahjuleu, Guatemala in 2008. This rural village in the Central Highlands of Guatemala lacks a safe and reliable water system and the chapters quickly recognized that the solution for the village was as much social as it was technical.

To create an immediate impact within the village, a rainwater harvesting system was installed at the elementary school in August 2009. The system serves 470 students and reintroduces the practice of rainwater harvesting. The implementation of this tank involved over 40 volunteers from the village, local non-governmental organization, Long Way Home and EWB Members from the Minnesota Professional and Student chapters. The village completed the storage tank with supplies purchased through funds donated to the chapter.

In January 2010 another assessment trip was undertaken to survey four of the six water sectors and to install several water meters. These meters are intended to monitor water use and loss for the 500 connections that serve the 2,500 residents of the Village. Despite communication challenges of both language and distance, the Minnesota Professional and student chapters and Simahjuleu have managed to share daily readings from these meters.

In May 2010 EWB-USA Minnesota Professionals will complete the topographic survey, share results of the monitoring program, and plan system improvements. To date, numerous potential solutions have been investigated within three main categories: supply, distribution, and demand. Together, Simahjuleu and EWB-USA are on the way to creating a safe and reliable water supply.



By July of 2009, the community of Bukhaweka had a 40 meter deep well, the first year-round clean drinking water source that will help over 2,000 people.

SOLAR POWER & WATER HARVESTING

EWB-USA Central Houston Professional Chapter's program in Bukhaweka, Uganda began in late 2007 with an email from Kizito Michael Waburoko, an optometrist and Executive Director of the Bukhaweka Vocational Training Centre (BVTC). The BVTC was started to teach skills in tailoring, bricklaying, carpentry, home economics, and computers. However, they lacked basic necessities like clean water and electric power at the facility. Water usually came from scarce, contaminated water sources, including a spring and two streams that are dry part of the year.

Six EWB-USA Central Houston members worked together with the BVTC Board, a local well driller, a Ugandan solar engineer and Rotary. By July of 2009, the community had a 40 meter deep well, the first year-round clean drinking water source that will help over

2,000 people. Six months later, the vocational center had a solar power system installed by Ugandans with locally-obtained materials that powered two computers, a printer, and eight lights. In May 2010, EWB-USA Central Houston and the BVTC worked with interlocking stabilized soil block (ISSB) technology and a water treatment system for the spring.

The Bukhaweka project was life-changing for project managers Sara Beck and Kim Chanslor. Since her first trip to Uganda in 2003, Sara decided to change careers from aerospace to environmental engineering and is using her training to help the people of Uganda. Kim Chanslor learned that, even as an engineer for a large consulting firm, she can realize her dream of using her skills as an environmental engineer to help communities like Bukhaweka.

**EWB-USA
Central
Houston
Professional
Chapter**

**Project Location:
Bukhaweka,
Uganda**

**Total Project Cost:
\$25,000**

**Total People Affected:
2,000**



Assisting with this school's water supply and sanitation will be the first project implemented by the EWB-USA Nashville Professional Chapter.

**EWB-USA
Nashville
Professional
Chapter**

**Project Location:
Chapelton,
Clarendon Parish,
Jamaica**

**Total Project Cost:
\$15,000**

**Total People Affected:
500**

WATER DISTRIBUTION & SANITATION

Five members of the EWB-USA Nashville Professional Chapter traveled to Jamaica on an assessment trip for the Chapelton program in December 2009. Chapelton, located in Clarendon Parish in central Jamaica, is a rural community of approximately 4,000 people. Residents have access to a water system operated by the National Water Commission (NWC). However, due to Chapelton's location with the distribution system, water is reportedly available only a few hours in the morning and is more recently reported as available only one to two days per week on average. When the system supply is inadequate, the NWC customers, like the many members of the community who are not connected to the system, must carry water from local spring or river sources.

The need for a more consistent water supply was voiced by community members to the

Nashville travel team throughout the assessment trip. In addition to hardships associated with having to fetch water, lack of water also impacts sanitation, especially at schools, and is evident in an increase in gastrointestinal diseases during the dry season when supplemental water supplies are more limited.

The first project, anticipated to be implemented late 2010, will improve the water storage and distribution system at the local all-ages school, attended by approximately 500 students. Future phases of the program are expected to address more community-wide water needs by working with the NWC to improve efficiency/productivity of the existing system, identify supplemental water sources, and address water loss from the system.



Dave Newman and student William Casson sieving filter media.

WATER FILTRATION

In May 2009, the EWB-USA University of Arizona Student Chapter completed its Mafi Zongo Water Project. Mafi Zongo, located in the Volta Region of Ghana, Africa, had a pre-existing water filter and distribution network intended to serve 10,000 people in nearly 30 communities. The filter had not been designed appropriately to handle the high turbidity of the raw water while still meeting demand. The system was plagued with clogging such that the distribution network could only deliver limited amounts of water a few days a week. Because of its unreliability, many people simply continued to fetch water from an unclean reservoir several kilometers away.

The University of Arizona students and local engineers designed a larger gravity-feed roughing filter. The new filter was designed

to handle up to 250,000 liters a day without clogging. The system was built over three implementation trips in 2009. The excavation and construction was done by a local contractor, under the supervision of a pair of EWB-USA professional mentors and the washing of filter media and filling of the filters was done by community volunteers.

Though the system was designed fairly quickly, funding prevented implementation for two years after assessment. The biggest challenge faced by project members was maintaining contact and trust with the community over the two years. However, with major grants from EWB-USA sponsors and Rotary International, the project was completed and now allows women and children to fetch clean water at their local standpipes.

**EWB-USA
University of
Arizona Student
Chapter**

**Project Location:
Mafi Zongo,
Ghana**

**Total Project Cost:
\$90,000**

**Total People Affected:
over 10,000**

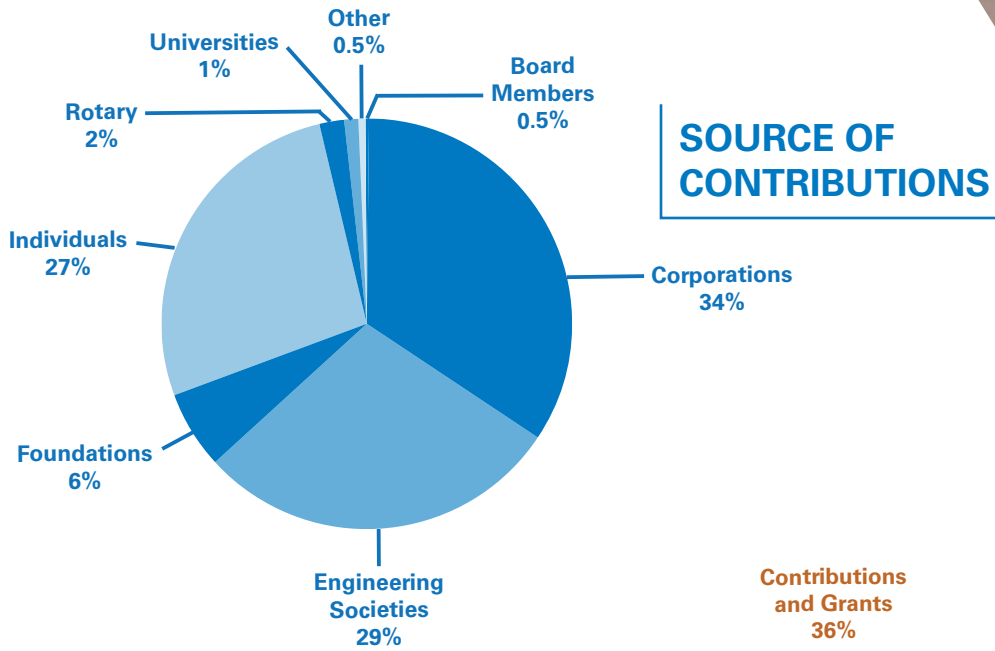
FINANCIAL LANDSCAPE

STATEMENT OF FINANCIAL POSITION*

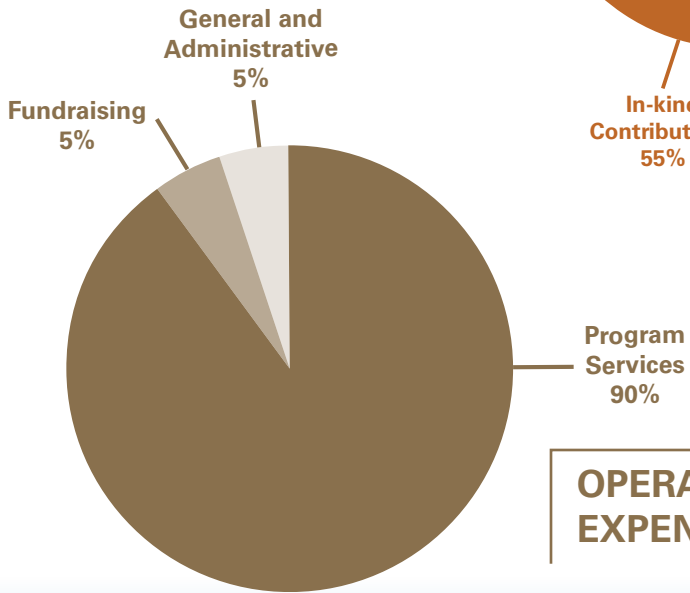
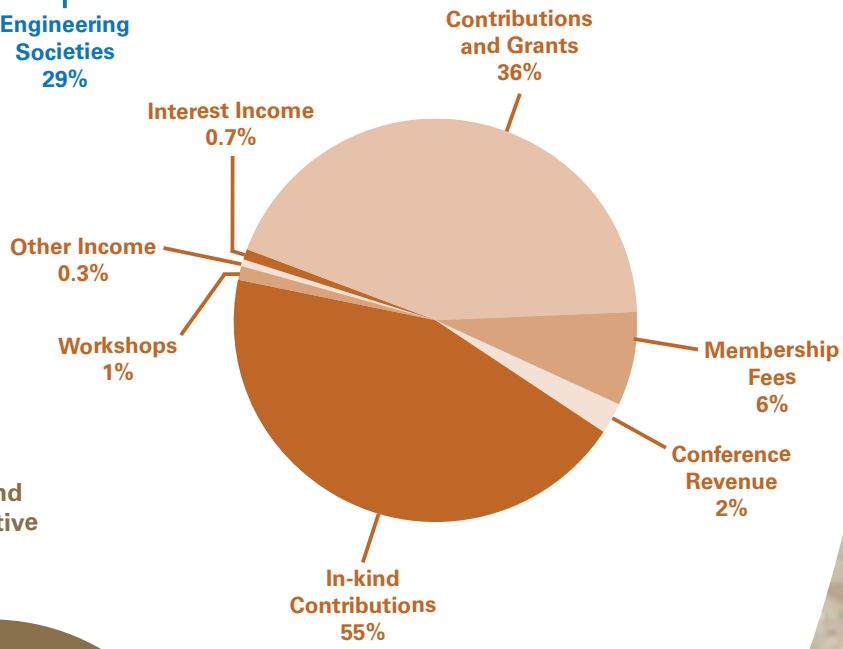
ASSETS	2009
Current assets	
Cash and cash equivalents	\$2,144,078
Misc. Other	\$433,435
Total current assets	\$2,577,513
Property and equipment	\$116,653
Less accumulated depreciation	(\$70,584)
Property and equipment, net	\$46,069
Intangible assets	\$35,4390
Less Accumulated Amortization	(\$15,951)
Intangible asset, net	\$19,439
Other assets	
Deposits	\$14,104
Total assets	\$2,657,125
LIABILITIES AND NET ASSETS	
Current liabilities	
Accounts payable and accrued expenses	\$133,108
Deferred revenue	\$192,225
Total current liabilities	\$325,333
Net assets	
Unrestricted	\$173,724
Temporarily restricted **	\$2,158,068
Total net assets	\$2,331,792
Total liabilities and net assets	\$2,657,125

** Funds restricted for project activity

*Please note that 40% of over 180 EWB-USA university chapters are independent of the organization's financial activities and hold their funds outside of EWB-USA accounts. Therefore, those financial activities are not reflected in the EWB-USA financial statement.



OPERATIONAL INCOME



OPERATIONAL EXPENSES



LEADERSHIP | BOARD OF DIRECTORS

FOUNDER

Bernard Amadei, Ph.D., *ex officio*
 Founder, Engineers Without Borders-USA
 Professor of Civil Engineering,
 University of Colorado

GOVERNING BOARD

David Stewart, Ph.D., P.E., *President*
 President and CEO,
 Stewart Environmental Consultants

William Wallace, *Past President*
 President, Wallace Futures Group, LLC

Joseph "Bud" Ahearn
 Vice Chairman, CH2M HILL

Paul W. Brandt-Rauf, SCD, MD, DrPH
 Dean, School of Public Health,
 University of Illinois

Daniel L. Harpstead, P.E., *Treasurer*
 Principal, Kleinfelder, Inc.

Robin A. Kemper, P.E., *ASCE Representative*
 Associate, French and Parrello Associates

Catherine A. Leslie, P.E., *ex officio*
 Executive Director,
 Engineers Without Borders-USA

Micki A. Marshall, P.E., *ASME Representative*
 Systems Analysis and Software - Advanced
 Concepts, UTC Pratt and Whitney Rocketdyne

Hannah Elizabeth Moore, *Student EWB-USA Representative*
 EWB-Columbia University Student Chapter

Michael W. Paddock, P.E., *Professional Member Representative*
 EWB-Wisconsin Prof. Partners Chapter
 Senior Project Manager, CH2M HILL

Arvind Phukan, Ph.D., D.I.C., P.E.
 Retired Professor of Civil Engineering,
 University of Alaska
 Coordinator for Water Resources,
 Rotary International

Thomas M. Rachford, Ph.D., P.E., *ASCE Representative*
 Vice President, Gannett Fleming, Inc.

Gregory Sauter, P.E.
 Senior Vice President, AECOM

Paul R. Shea, P.E.
 President, CDM Constructors, Inc.

Andrea Stancliff, P.E., *Professional Member Representative*
 EWB-South Central Alaska Professional
 Chapter
 Civil Engineer, Larsen Consulting Group

William "Britt" Stitt
 Chairman, Power Engineering Contractors,
 Inc.

Bob Walker, P.E.
 VP Engineering Applications,
 Underground Solutions, Inc.

Dr. Andrew J. Yager
 Officer-in Charge of the Water, Energy and
 Strategies, United Nations Dept. of Economic
 and Social Affairs



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GOLD LEVEL SPONSORS



SILVER LEVEL SPONSORS



STANDARD LEVEL SPONSORS





MEMBERSHIP | CHAPTERS

STUDENT CHAPTERS

Arizona State University Chapter
Binghamton University, State University of
New York Chapter
Boise State University Chapter
Boston University Chapter
Bradley University Chapter
Brown University Chapter
California Polytechnic State University,
Pomona Chapter
California Polytechnic State University, San
Luis Obispo Chapter
California State University, Chico Chapter
California State University, Fresno Chapter
California State University, Long Beach
Chapter
California State University, Los Angeles
Chapter
California State University, Sacramento
Chapter
Calvin College Chapter
Carleton College Chapter
Carnegie Mellon University Chapter
Carroll College Chapter
Case Western Reserve University Chapter
Catholic University Chapter
Central Michigan University Chapter
City College of New York Chapter
Clarkson University Chapter
Clemson University Chapter
Cleveland State University Chapter
Colorado School of Mines Chapter
Colorado State University Chapter
Columbia University Chapter
Drexel University Chapter
Duke University Chapter
Florida International University Chapter
Florida State University - Florida A&M
University Chapter
Fort Lewis College Chapter
George Washington University Chapter
George Washington University of Public
Health and Health Services Chapter
Georgia Institute of Technology Chapter
Gonzaga University, Spokane Chapter
Harvard University Chapter
Hope College Chapter
Howard University Chapter
Humboldt State University Chapter
Illinois Institute of Technology Chapter
Indiana University- Purdue University,
Indianapolis Chapter
Iowa State University Chapter
Johns Hopkins University Chapter
Kansas State University Chapter
Kettering University Chapter
Lafayette College Chapter
Lamar University Chapter
Lawrence Technological University Chapter
Lehigh University Chapter
Louisiana Tech University Chapter
Loyola Marymount Chapter
Marquette University Chapter
Marshall University Chapter
Massachusetts Institute of Technology
Chapter
Mercer University Chapter
Miami University Chapter
Michigan State University Chapter
Michigan Technological University Chapter
Milwaukee School of Engineering Chapter
Minnesota State University Chapter
Missouri University Science and Technology
Chapter
Montgomery College Chapter
New Jersey Institute of Technology Chapter
New Mexico State University Chapter
New York Institute of Technology Chapter
North Carolina State University Chapter
North Dakota State University Chapter
Northeastern University Chapter
Northern Arizona University Chapter
Northern Illinois University Chapter
Norwich University Chapter
Ohio State University Chapter
Ohio University Chapter
Oklahoma State University Chapter
Olympic College Chapter
Oregon Institute of Technology Chapter
Oregon State University Chapter
Polytechnic Institute of New York University
Chapter
Portland State University Chapter
Princeton University Chapter
Purdue University Chapter
Rice University Chapter
Roger Williams University Chapter
Rose-Hulman Institute of Technology Chapter
Rowan University Chapter
Rutgers University Chapter
San Diego State University Chapter
San Jose State University Chapter
Santa Clara University Chapter
Seattle Pacific University Chapter
Seattle University Chapter
South Dakota State University Chapter
Southern Illinois University, Carbondale
Chapter
Southern Illinois University, Edwardsville
Chapter
Southern Methodist University Chapter
State University of New York College of
Environmental Science and Forestry
Chapter
Stevens Institute of Technology Chapter
Syracuse University Chapter
Texas A&M University Chapter
Texas State University Chapter
Texas Technology University Chapter
The College of New Jersey Chapter
Tufts University Chapter
Union College Chapter
United States Air Force Academy Chapter
University of Akron Chapter
University of Alabama, Birmingham Chapter
University of Alabama, Huntsville Chapter
University of Alabama, Tuscaloosa Chapter
University of Alaska, Anchorage Chapter
University of Arizona, Tucson Chapter
University of Buffalo, State University of New
York Chapter
University of California, Berkeley Chapter
University of California, Davis Chapter
University of California, Irvine Chapter
University of California, Los Angeles Chapter
University of California, Riverside Chapter
University of California, San Diego Chapter
University of California, Santa Barbara
Chapter
University of Central Florida Chapter
University of Cincinnati Chapter
University of Colorado, Boulder Chapter
University of Connecticut Chapter
University of Delaware Chapter
University of Evansville Chapter
University of Florida Chapter
University of Georgia Chapter
University of Hartford Chapter
University of Hawaii Chapter
University of Houston Chapter
University of Illinois, Chicago Chapter
University of Illinois, Urbana-Champaign
Chapter
University of Iowa Chapter
University of Kansas Chapter
University of Kentucky Chapter
University of Maine Chapter
University of Maryland, Baltimore Chapter
University of Maryland, College Park Chapter
University of Massachusetts, Amherst
Chapter



PROFESSIONAL CHAPTERS

University of Massachusetts, Dartmouth Chapter
University of Mexico Chapter
University of Miami Chapter
University of Minnesota Chapter
University of Mississippi Chapter
University of Missouri, Columbia Chapter
University of Missouri, Kansas City Chapter
University of Montana, Montana Tech Chapter
University of Nebraska Chapter
University of Nevada, Las Vegas Chapter
University of Nevada, Reno Chapter
University of New Hampshire Chapter
University of New Haven Chapter
University of North Carolina, Chapel Hill Chapter
University of North Florida Chapter
University of Oklahoma Chapter
University of Pennsylvania Chapter
University of Pennsylvania Chapter
University of Pittsburgh Chapter
University of Portland Chapter
University of South Florida Chapter
University of Southern California Chapter
University of Tennessee, Chattanooga Chapter
University of Tennessee, Knoxville Chapter
University of Texas, San Antonio Chapter
University of Toledo Chapter
University of Tulsa Chapter
University of Utah Chapter
University of Vermont, Burlington Chapter
University of Washington Chapter
University of Wisconsin, Madison Chapter
University of Wisconsin, Milwaukee Chapter
University of Wisconsin, Platteville Chapter
University of Wyoming Chapter
Utah State University Chapter
Valparaiso University Chapter
Vanderbilt University Chapter
Villanova University Chapter
Virginia Polytechnic Institute Chapter
Walla Walla College Chapter
Washington State University Chapter
Washington University, St. Louis Chapter
West Virginia University Chapter
Western Michigan University Chapter
Western Washington University Chapter
Wichita State University Chapter
Widener University Chapter
Worcester Polytechnic Institute Chapter
Yale University Chapter

Albany Professional Chapter
Albuquerque Professional Chapter
Asheville Professional Chapter
Atlanta Professional Chapter
Baton Rouge Professional Chapter
Birmingham Professional Chapter
Blue Ridge Professional Chapter
Boston Professional Chapter
Boulder Professional Chapter
Brooklyn-Queens-Long Island Professional Chapter
Central Arkansas Professional Chapter
Central Houston Professional Chapter
Central Ohio Professional Chapter
Central Oklahoma Professional Chapter
Chattanooga Professional Chapter
Chesapeake Professional Chapter
Chicago Professional Chapter
Cincinnati Professional Chapter
Colorado Springs Professional Chapter
Dayton Professional Chapter
Denver Professional Chapter
Detroit Professional Chapter
East Central Illinois Professional Chapter
El Paso Professional Chapter
Fort Collins Professional Chapter
Fort Walton Beach Professional Chapter
Gainseville Professional Chapter
Gateway Professional Chapter
Greater Austin Professionals Chapter
Greater Charlotte Area Professional Chapter
Greater Lansing Professional Chapter
Greater Salt Lake Professional Chapter
Guam Professional Chapter
Hampton Roads Professional Chapter
Hartford Professional Chapter
Heart of Illinois Professional Chapter
High Plains Professional Chapter
Honolulu Professional Chapter
Huntsville Professional Chapter
Indianapolis Professional Chapter
Inland Empire Professional Chapter
Inland Northwest Professional Chapter
Jacksonville Professional Chapter
James River Professional Chapter
Kansas City Professional Chapter
Kitsap County Professional Chapter
Las Vegas Professional Chapter
Lehigh Valley Professional Chapter
Los Angeles Professional Chapter
Madison Area Professional Chapter
Mid-Atlantic Professional Chapter
Mid-Columbia Professional Chapter

Minneapolis Professional Chapter
Missouri Professional Chapter
Montana Professional Chapter
Nashville Professional Chapter
Nebraska Professional Chapter
New London County Professional Chapter
New Orleans Professional Chapter
New York Professional Chapter
North Coast Professional Chapter
North Texas Professional Chapter
Northern New Jersey Professional Chapter
Northwest Washington Professional Chapter
Oklahoma East Professional Chapter
Orange County Professional Chapter
Phoenix Professional Chapter
Pittsburgh Professional Chapter
Portland Maine Professional Chapter
Portland Professional Chapter
Puget Sound Professional Chapter
Red River Valley Professional Chapter
Research Triangle Professional Chapter
Rio Grande Valley Professional Chapter
Rocky Mountain Professional Chapter
Sacramento Professional Chapter
San Diego Professional Chapter
San Francisco Professional Chapter
San Jose Valley Professional Chapter
San Luis Obispo Professional Chapter
Seattle Professional Chapter
Sonoma County Professional Chapter
Sout West Florida Professional Chapter
South Carolina Professional Chapter
South Central Alaska Professional Chapter
South Central Florida Professional Chapter
South Denver Professional Chapter
South Houston, Johnson Space Center Professional Chapter
Southern Arizona Professional Chapter
Spokane Professional Chapter
Syracuse Professional Chapter
Treasure Valley-Boise Professional Chapter
Vermont Professional Chapter
Washington, D.C. Professional Chapter
Western Massachusetts Professional Chapter
Wisconsin Professional Chapter
Wyoming Professional Chapter



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