

# **Engineers Without Borders™ - USA Sourcebook**



**Fall 2005 Edition**

## Foreword

This document is being written as an overall guide for project applicants, project mentors, students, and professionals working through Engineers Without Borders - USA. It is meant to be a resource for the major steps, components or milestones in the life of a typical project for EWB-USA.

The focus of this sourcebook is the pre-project assessment, the project evaluation, and selection process, as well as implementation of EWB-USA projects. It is imperative that potential problems be identified, anticipated, and avoided prior to project involvement and not after damage has been done despite the best of intentions. Experience has shown that post-project problem mitigation is much more difficult, undesirable, and costly than good and thorough project planning coordinated with local involvement and approval. The adage "*An ounce of prevention is worth a pound of cure*" applies to EWB-USA projects. It is with this in mind that the authors encourage participants in all EWB-USA projects to use this sourcebook.

## Contributors

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EWB-USA thanks you.

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## SECTION 1: OVERVIEW OF EWB

### 1.1 Mission

The mission of EWB-USA is to "*partner with disadvantaged communities to improve their quality of life through the implementation of environmentally and economically sustainable engineering projects, while developing internationally responsible engineering students*". EWB-USA links engineering students and faculty with professional engineers to work on development projects worldwide. EWB-USA's Technical Advisory Committee (TAC) provides technical review and oversight of the entire EWB-USA project process, from project application to field implementation and outcomes assessment. This short sourcebook is written to familiarize TAC members with the functions of the TAC and with some useful guidelines that have been developed to aid in fulfilling these functions. We hope you find this sourcebook useful as you engage in various TAC activities. Thank you for volunteering your time and expertise to EWB-USA through the TAC.

### 1.2 Definitions

1. *ARC*: Application Review Committee
  - a. Review the project applications to determine if they are appropriate projects for EWB.
2. *Beneficiary Community*: The developing community that benefits from the EWB project
3. *TAC*: Technical Advisory Committee
  - a. Reviews project applications, assigns projects to chapters, monitors project progress, and approves projects for site assessment and implementation travel.
4. *Site Assessment*: When the chapter sends a few members to assess the scope of work for the project and takes detailed engineering notes for the design phase.
5. *Implementation*: When the design is completed, the team members travel to the country to build and implement the design.
6. *Mentor*: A professional or a faculty member who provides technical expertise for a student project.
7. *Project Lead*: A professional or faculty member who takes responsibility for managing a project. Can also be the mentor.
8. *Design Reviewer*: A professional member of EWB-USA who reviews project designs prior to implementation.
9. *Principal Reviewer*: A professional member of EWB-USA who leads the Design Reviewers in the review of a project.

### 1.3 Code of Ethics

EWB-USA project participants promote high engineering standards by following the American Society of Civil Engineer's Code of Ethics. The Fundamental Principles are:

"Engineers uphold and advance the integrity, honor and dignity of the engineering profession by:

1. using their knowledge and skill for the enhancement of human welfare and the environment;
2. being honest and impartial and serving with fidelity the public, their employers and clients;
3. striving to increase the competence and prestige of the engineering profession; and;
4. supporting the professional and technical societies of their disciplines.

The Fundamental Canons are:

1. Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties.
2. Engineers shall perform services only in areas of their competence.
3. Engineers shall issue public statements only in an objective and truthful manner.
4. Engineers shall act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest.

5. Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others.
6. Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession.
7. Engineers shall continue their professional development throughout their careers, and shall provide opportunities for the professional development of those engineers under their supervision.”

In addition, Engineers Without Borders – USA has adopted a stated policy of nondiscrimination in regard to all persons, irrespective of their race, color, creed, religion, national origin, sex, sexual preference, age, disability or veteran's status, and compliance with all state and federal requirements of law and regulations with respect to employment, volunteer participation and the provision of services.