Colorado State University Chapter of Engineers Without Borders: Potable Water Supply and Distribution in La Criba, El Salvador

Christopher Bareither, Brennan Lutkewitte, Cody Oser
Department of Civil and Environmental Engineering, Colorado State University, Fort Collins, CO

Tessa Alford, Gabe Neymark
Department of Mechanical Engineering, Colorado State University, Fort Collins, CO

Griselda Landa-Posas
Department of Fish, Wildlife, and Conservation Biology, Colorado State University, Fort Collins, CO

Teigan Gulliver
JDS-Hydro Consultants, Inc., Colorado Springs, CO

Abstract. The Colorado State University student chapter of Engineers Without Borders (EWB-CSU) has been working on a potable water supply and distribution project in La Criba, El Salvador since January 2011. The overall goal of the project is to improve the quantity and quality of potable water for a rural community of approximately 700 residents. The project includes three distinct implementation phases: Phase 1 – well and pump installation; Phase 2 – transmission line installation and water storage tank construction; and Phase 3 – distribution system improvement. Phase 1 has been completed, Phase 2 is currently being implemented, and Phase 3 is planned future work. The project includes collaboration between EWB-CSU, Rotary International, and the community of La Criba. Project success and progression is intimately associated with effective collaboration between all three partners. Furthermore, all elements of the project are led by student members of EWB-CSU. This presentation will provide an overview of the project, document hydraulic design of the well, transmission line, and new water storage tank, address non-technical constraints, and finally identify aspects of sustainability that are instrumental to project success.