CARE–El Salvador

This project commenced with a seminar presented by David Venhuizen in San Salvador to a group of interested engineers, government officials and aid agency workers on the decentralized concept as a way to provide more affordable wastewater management in El Salvador, and on the high performance biofiltration as the treatment method most cost efficient and readily manageable in that concept. This was part of an effort funded by a U.S. AID grant. The intention was to implement a small demonstration-scale project, perhaps serving 10 houses. However, an alliance was formed with CARE-El Salvador to leverage this grant with other funds provided to CARE to implement a wastewater system in a village on the Guatemalan border. While it was planned to provide service to this village with a conventional collection system and a lagoon treatment system, an isolated neighborhood in a separate drainage area was selected for a larger scale demonstration of a decentralized concept system.

This portion of the village had 80 homes currently in place, with the potential for up to 120 at full buildout. David Venhuizen instructed CARE personnel in the design of effluent sewers and treatment system, provided design details for the collection and treatment systems, directed the system layout, advised on system construction, and was a hands-on participant in the completion and commission of the system. The collection system consists of septic tanks receiving flow from the houses, with effluent from these tanks fed to the treatment center through a small-diameter effluent sewer system. The treatment system is composed of both a high performance biofiltration unit, using non-woven polypropylene geotextile fabric media, and a subsurface flow wetland unit, so that both concepts could be demonstrated. Effluent is routed to reuse projects that produce income for the residents.

Treatment Center, Approaching Completion

Demonstration Drip Irrigation Field, Being Installed by Village Residents

View of the Drip Field and Wetland Beds from High Up in a Tree