

Rehabilitation of Panimaquip, San Lucas Toliman, Guatemala

"Hurricane Stan laid waste to a significant portion of the Panimaquip water system in 2005. Since then the system has deteriorated such that water flows for a few hours a day. Members of the community approached representatives of the Rotary Club of Lake Atitlan (RCLA) and Agua del Pueblo (AdP) in 2016. RCLA representatives have been visiting Panimaquip and San Martin annually since then. The project was originally built in 1972. At the time the project was the largest rural potable water system in the Department of Solola. The project pumps water from Lake Atitlan, ten kilometers from Panimaquip.

Background on Panimaquip

Panimaquip is located 10 km from the municipal capital, 46 km from the departmental capital and 145 km from the capital city of Guatemala. One can access Panimaquip through Godinez, Solola. Corn, Beans, Flowers, and coffee are the main sources of income.

In 2023, RCLA representatives asked Agua del Pueblo to complete a preliminary feasibility study for San Martin. San Martin is a paraje contiguous to Panimaquip. The study estimated we could rehabilitate San Martin's system for \$30,000. We have just begun studying the 'mother of all San Lucas Toliman water projects' for Panimaquip. Initial cost estimates approach \$450,000. The Rotary Club of Lake Atitlan has a significant history with Agua del Pueblo. We have teamed together for three successful global, two district and a number of club-to-club grants.

Proposed Project

The project would replace a significant portion of the PVC with galvanized steel. The distribution network must be rehabilitated and expanded to carry additional water. The majority of the families have pit latrines. The latrines have been made with the community's own resources. Most of the latrines are in poor condition. In many locations, the gray water runs on the ground and onto the roads. The proposed project would include upgrading the sanitation system including installation of "mini-wastewater treatment plants".

The community has agreed to take the lead on the project and provide all the unskilled labor. The residents have agreed to provide rights of way for the expanded distribution pipeline. The Municipality of San Lucas has agreed to fund a significant portion of the project. The project would also include individual water meters for each household. The project will also build another wastewater treatment system for the school.

Guatemalan Government Requirements

The key components are the requirements of the local government. We ask WASH-RAG for \$2,000 for a portion of the Government-required studies. Local requirements require an estimate of monthly tariffs to determine if the community is economically able to sustain the operation and maintenance. To estimate monthly costs, we need preliminary engineering designs including estimates of Total Dynamic Head at multiple times during a typical day. We need non-GPS, tripod-measured topography to estimate the differences of elevation between the water source, the distribution tank, and the critical taps in Vista Panimaquip and San Martin. GPS does not offer the required sensitivity. We also need to draft and sign a contract with at least 80% of the community. The contract would confirm the town's willingness to pay. Finally, we need to obtain authorization and municipal financial support. The \$2,000 will not cover ALL of this work, but WASH RAG support will facilitate the required additional funding.