

Marcala

Marcala Water Treatment Plant

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July 10, 2008

The 12,000 person town of Marcala, Honduras took possession of their newly [renovated water treatment plant](#) from [International Rural Water Association](#) on July 5, 2008. The occasion, covered by live radio and television, was marked by a community celebration, dedication and ribbon cutting ceremony.

The plant was redesigned by IRWA with support from Cornell University's AguaClara group and the engineering firm DeWild, Grant, Reckert & Associates of Rock Rapids, Iowa. The plant, formerly a failed upflow rock filtration plant, was redesigned to a flocculation/sedimentation plant with chlorine disinfection. IRWA and its partners were able to use the existing footprint of the plant creating a series of flocculation and sedimentation basins and finished water storage. Plate settlers were employed in the sedimentation basins to improve plant performance. Construction was accomplished by local labor with oversight by IRWA and our partner organization in Honduras, Agua y Desarrollo Comunitario (ADEC).

The plant was designed to operate without power as electricity is not available at the site. The treatment process including chemical addition is accomplished through gravity flow. Nearly all of the materials used to construct the plant including the plate settlers were procured from sources in Honduras.

Total costs for the plant were \$64,000 which were shared by IRWA (\$36,000) and the town of Marcala (\$28,000). The town has hired two full time operators and has recently been notified by the Honduran national government of a grant to bring electrical power to the site.

Water quality has improved tremendously as a result of the plant. June through November marks the rainy season in Marcala during which the Chieflador River, source for the plant, becomes very muddy. The plant is operating at 500 gallons per minute and has been treating water with turbidity levels as high as 750 NTU. The community is extremely happy with the quality of the water and there is a real sense of excitement for the future.

[Marcala map](#)