



### **Santa Rosa Hospital Wastewater Treatment Facility**

*City staff takes waste-water sample for testing. Lab results show effluent leaving the hospital meets Philippine government standards.*

Rapid urbanization of many areas in the Philippines has led to water pollution and environmental degradation. Approximately 90% of sewage in the country is not properly treated, thus polluting waterways and causing significant health hazards. The Philippine Department of Health reports at least 700,000 cases of diarrheal diseases annually thus lead to about 29 deaths each day, according to the World Health Organization.

With technical assistance from USAID's Philippine Sanitation Alliance (PSA), the Santa Rosa City government and stake-holders developed an action plan to build wastewater treatment plants for the City's public hospital, market, and low-cost housing project. Like most public hospitals in the country, the City Hospital had a septic tank and not a full sewage treatment system as required by law. Polluted effluent from the septic tank flowed into a nearby irrigation canal and then into Laguna Lake, the country's largest lake and source of livelihood for poor fisherfolk. From 2008-2009, PSA assisted the City to build a low-cost, low-maintenance sewage treatment plant for the hospital, which is providing medical services to more than 1,200 people.

When asked about the impact of the new facility, Chief Nurse Shiela Casis said, "We are now assured that the wastewater coming from sinks, toilets and bathrooms is safe to discharge to nearby streams." "We don't smell the foul odor in our sink as what we had experienced before," added Nutritionist-Dietician Head Fermina Ancita. Laboratory testing of effluent done in November 2009 showed a biochemical oxygen demand of 21 mg/l, well below the government's standard of 50 mg/l. Prior to USAID's assistance, pollution loading of the effluent leaving the hospital was between 250-300 mg/l. The City spent about \$114,000 to build the facility, and received training and capacity building assistance from USAID's PSA on the design, construction, operations and maintenance of the system.

The hospital campus at Santa Rosa is spread out over more than a hectare in several buildings. Wastewater discharges from multiple locations into existing septic tanks which have been converted to pump tanks to send the effluent under pressure to the wastewater treatment facility. The wastewater system for the hospital uses an anaerobic tank coupled with an SBR for secondary treatment. For more information: <http://philippines.usaid.gov/programs/energy-environment/success-stories/santa-rosa-hospital-wastewater-treatment-facility>