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## SUCCESS STORY

# Public Market Reuses Treated Wastewater

**Proper wastewater treatment protects vendor livelihoods and Laguna Lake**



Staff/Muntinlupa City Public Information Office

Angelina Bulos is a stall owner who also heads the Alabang Public Market Cooperative.

*“[The wastewater facility] is very helpful to us vendors because we won’t have a hard time maintaining clean standards in the market,” said Angelina, a stall owner. “And [now] there would be no reason for environmental agencies to close the market down.”*

Years ago, the Muntinlupa Market was a muddy and messy public market with acrid odors created by 1,235 stalls selling everything from meat and fish to vegetables. Wastewater generated by the market’s eateries, toilets, and the stall sections polluted a tributary creek of Laguna Lake, one of the most vital inland bodies of water in the Philippines and a source of drinking water and freshwater fish for Metro Manila. To avoid further polluting Laguna Lake, the Muntinlupa City government invested \$130,000 in construction of an underground wastewater treatment system. USAID, through the Local Initiatives for Affordable Wastewater Treatment (LINAWE) project, provided technical assistance to the city to design this low-cost, low-maintenance model facility; the first of its kind in the Philippines.

The system uses grit screens, septic tanks, and an anaerobic-baffled reactor to reduce the pollution level of the wastewater from more than 600 milligrams per liter BOD (biochemical oxygen demand) to less than 30. Crushed glass and coco peat are being tested as low-cost filters for the final stage of the treatment process. Coco peat is widely available since it is a waste product of the coconut processing industry and is proving to be very effective in removing pollutants. The treated water is safe to use for flushing toilets, street cleaning and watering plants. In addition, a reinforced-cement parking lot and loading dock cover the underground treatment facility, so it doesn’t take up any additional space in the crowded market complex.

The Muntinlupa Market facility began trial operations in February 2006 and became fully operational in April 2006. This innovative treatment plant cost one-third less than a conventional plant to construct while operation and maintenance costs are less than half. The use of recycled water also saves the city approximately \$500 in monthly water bills. USAID, through LINAWE, is assisting five other cities to construct these highly successful, efficient, and ecologically-friendly public market treatment plants in the Philippines.